

college **AND UNIVERSITY** **business**

AUGUST 1959

Residence Halls: 22 Page Feature

Retirement Benefits Analyzed

Organization of Instructional Programs

Conducting a Self-Study, Part 3

Tenure Committee and the Courts



RESIDENCE HALL, MOORE INSTITUTE OF ART, SCIENCE AND INDUSTRY (page 42)

of course it's...



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SOLID PLASTIC TOPS

*on that
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by . . . SLIGH-Lowry*

Shown above is a grouping of Sligh's smart and practical #700 Contract Group. Hard maple with "Tan Cork" FIBERESIN Solid Plastic Tops. Beds have metal frames on glides.

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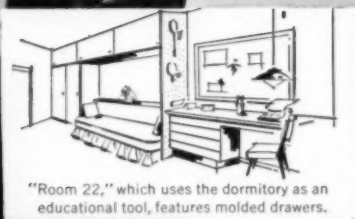
- Called the A-56-A, it is made of natural rubber vulcanized with brass reinforcements. Rubber? Yes, we've found it best by far. Rubber is actually preserved by water—not deteriorated by it—and the flexing action prolongs its life.

- Not all the improvements we adopt from research make our headlines, but the Flush Valves we make today are better than ever. We know they've got to be to merit the continued confidence of those who specify, select and install them. And since you can have Sloan quality at no extra cost—why not make sure you get it.



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AMONG THE AUTHORS: Dr. John Dale Russell, New York University professor of institutional research, out of a long career of research writes on the break-even points in the organization of instructional programs. Prior to accepting his present appointment, Dr. Russell was chancellor of the Board of Finance of Higher Education for the State of New Mexico. He went to the New Mexico post from a position as assistant commissioner of education in the Department of Health, Education and Welfare in the federal government. He had previously served for many years as professor of higher education administration at the University of Chicago. He is the author of "The Finance of Higher Education," an authoritative volume considered to be required reading for those college or university administrators who have responsibility for financial administration. . . . Paul A. Walgren, controller of the University of Southern California, writes on the subject of changing times as they affect retirement benefits. His article on new regulations of the Social Security Act appeared in the December 1958 issue of COLLEGE AND UNIVERSITY BUSINESS.



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Gymnasium Floors

Question: Have there been any research studies made concerning the use of gymnasium floors for dancing, as well as for basketball? — H. B., Mont.

ANSWER: Gymnasium floors for most sports activities require a relatively nonslip surface treatment. It becomes a matter of degree as to how much nonslip one should try for, and this is generally a matter of coach and player preference for the particular sport and a compromise between ideals for each sport when multiple purpose is the rule. I am assuming that reference is made here to wood flooring and the process of preparation and care will be based on that assumption.

The research department of the Maple Flooring Manufacturers Association recommends the following minimum standards for good floor finish: (1) The seal must penetrate the top surface of the wood. (2) It must seal the pores so as to keep out dirt and resist soil stains. (3) The finish with its penetrating quality must not darken the wood. (4) The finish must reflect light so as to improve illumination. (5) The finish should be non-slippery. (6) The finish must not mar, scratch or flake off. (7) The finish must be of such quality that, if it becomes necessary to touch up worn spots, this can be accomplished without complete refinishing. (8) The finish (sealer) should be resistant to water. (9) The finish, after application, must not present a maintenance problem. It must ensure economy and maintenance as to eliminate constant resanding and complete refinishing.

If you have obtained a good base under these standards, the degrees of nonslip can then be varied by the use of rosin or nonslip waxes.

A floor treated as has been outlined is in good condition for athletic sports activities but will not be good for dancing. In order to prepare this floor for dancing, about 24 hours before the dance, if schedules permit, the floor should be swept and then treated with a dressing, which is sprayed on 36 inch applicators. If time does not permit, this dressing is omitted. Powdered borax is then sprinkled on the floor for the desired degree of slipperiness.

After the dance the entire floor is washed with a special cleaner to remove all slipperiness produced by the

borax and to remove scuff and black marks. Sometimes it is also necessary to use a little steel wool completely to remove these marks. When dry, the floor is again treated with a dressing and is then ready for athletic activities.

Preparation labor before the dance requires approximately four man-hours, and clean-up and restoration time about 24 man-hours for an area of 11,500 square feet.—OTTO C. KOHLER, *business manager, Mount Holyoke College.*

Courtesy Meals

Question: We have been furnishing the noon meal free of charge as a courtesy to the men and women on our nonacademic staff. We are wondering if, in reporting wages for Workmen's Compensation Insurance, we are expected to include the value of these meals. Is it necessary for us to report the wages of students who do domestic work for us — light cleaning and helping in the kitchen, which is almost the same type of work as our full-time employees do, whose wages we do report? — M. J., Wis.

ANSWER: Since the meals in question are furnished "as a courtesy" and not "for the convenience of the employer," i.e. to facilitate or to expedite the performance of assigned tasks, their cash value constitutes taxable income to the recipients under the provisions of the federal Internal Revenue Code. Whether furnished "as a courtesy" or "for the convenience of the employer," the cash value of employee meals and housing constitutes taxable compensation under the provisions of the Social Security Act. Consequently, it is quite probable that the insurance company would contend that their cash value should be included in the salary and wage totals used to compute the Workmen's Compensation Insurance premiums. However, since this is a question of the interpretation of a specific contract, i.e. the contract of insurance, it would be advisable to discuss the matter with a representative of the insurance company before tendering the additional insurance premium.

Students performing tasks of economic benefit to the college are employees subject to the provisions of Workmen's Compensation legislation, and their wages should be reported to the insurance company.—T. E. BLACKWELL, *educational management consultant, Washington University, St. Louis.*



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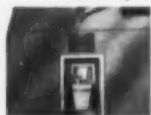
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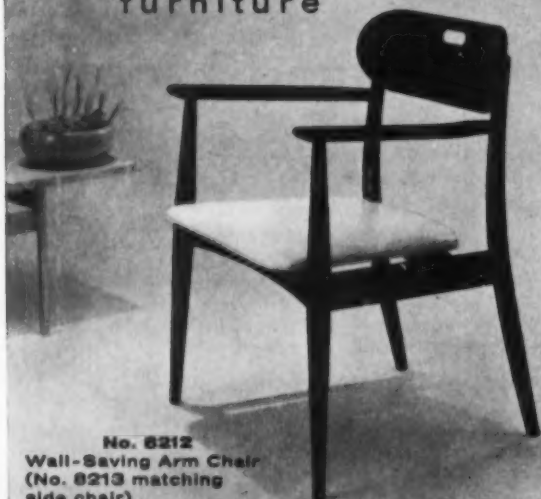
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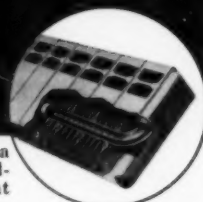
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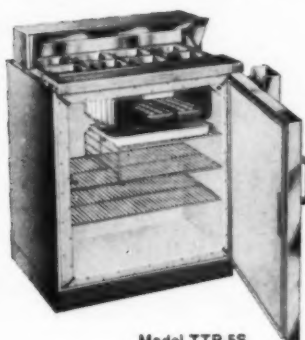
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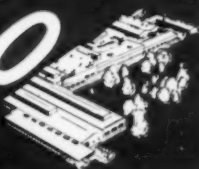


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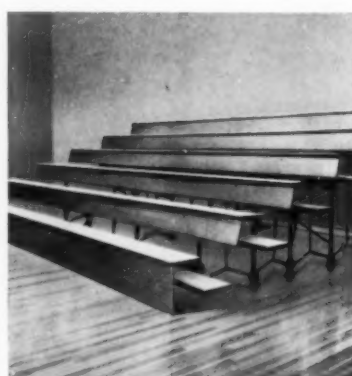
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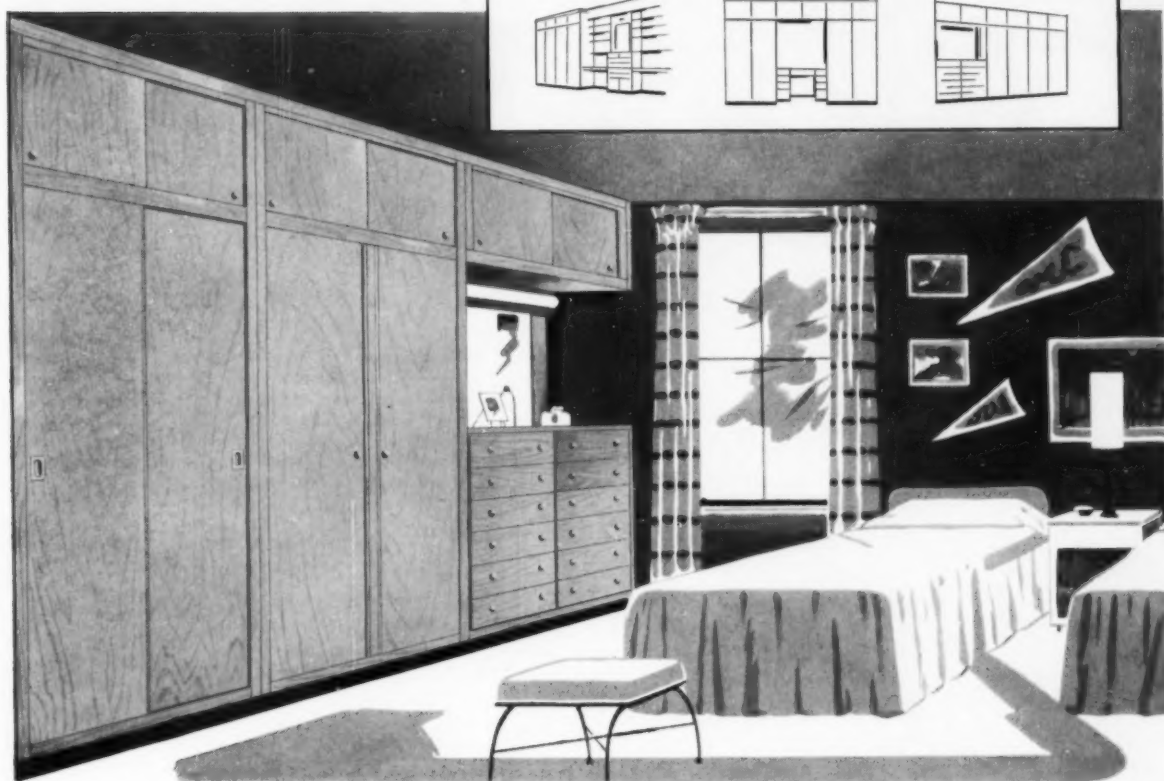
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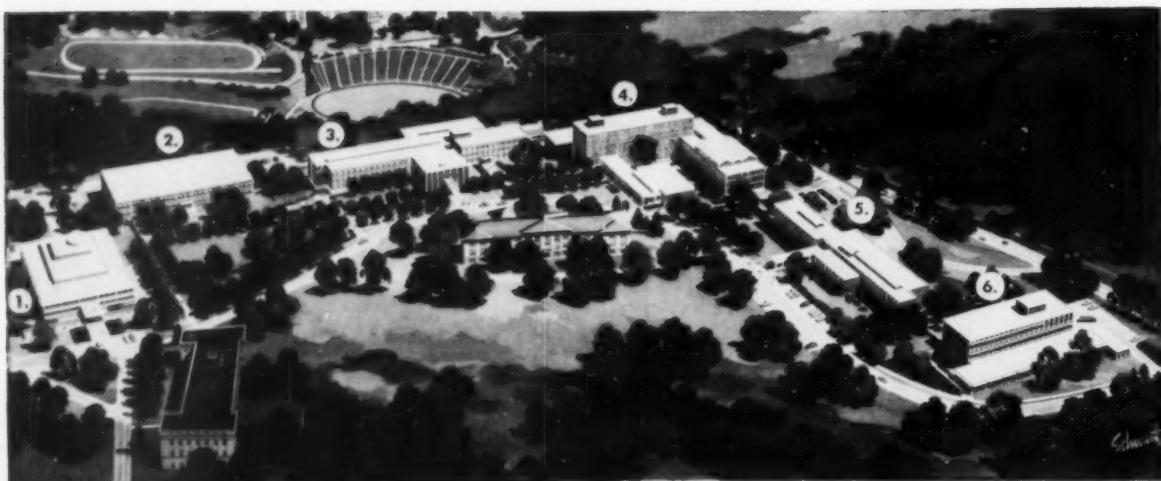
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LEGEND

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5. Animal Sciences Building
6. Food Technology Building

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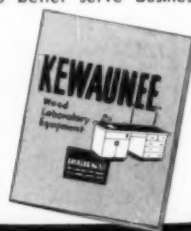


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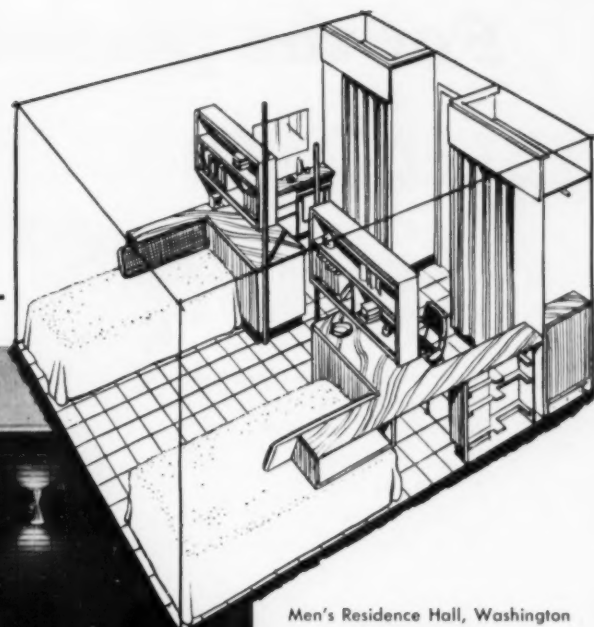
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Men's Residence Hall, Washington State College, Pullman, Washington.

(Left) Lounge.
(Below, top photo) Reception Area.
(Bottom photo) Dormitory Room.

Architects: JONES, LOVEGREN, HELMS & JONES, A.I.A., Seattle, Washington.

PHILIP S. KEENE, A.I.A., Washington State College Architect, Pullman, Washington.

Photographs: DEARBORN MASSAR, New York.

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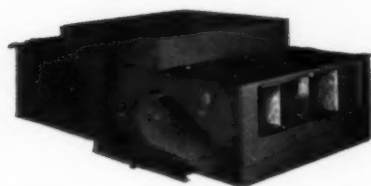
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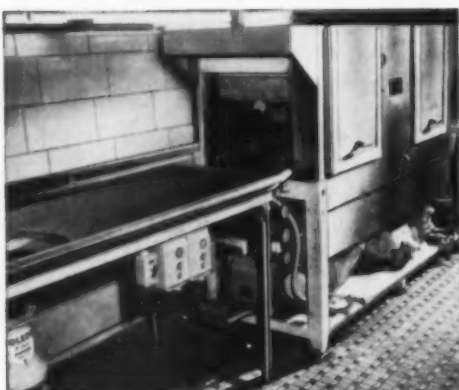
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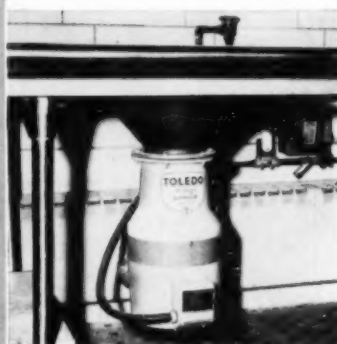


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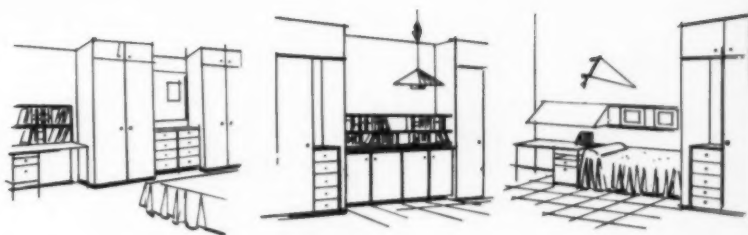


COUNTER
DISHWASHERS



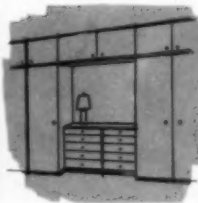
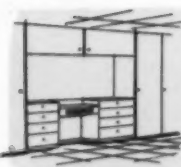
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**DORM LINE
FURNITURE
by
SIMMONS**



New ideas in dormitory furnishings start with Dorm Line's exceptional versatility. Unlimited combinations make it possible to achieve rooms attractively equipped to serve and survive student living. For more information turn the page...

*Unlimited room
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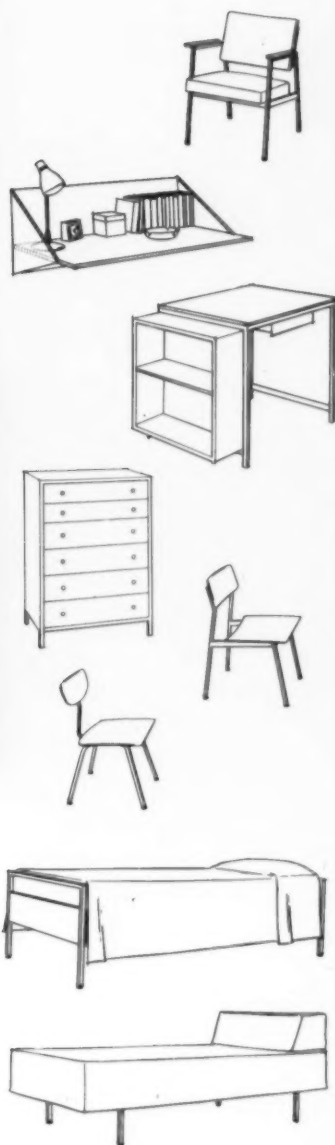
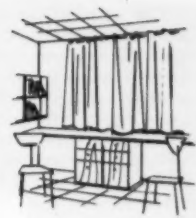
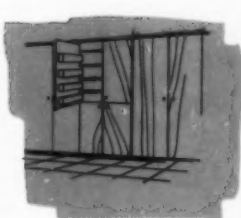
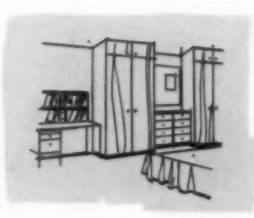
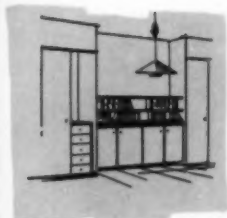
*Planning...installation...maintenance...financing
—all EASIER with Simmons Dorm Line*

From start to finish, your job is simplified with Dorm Line installations—simplified even in building design. Rooms may be planned in standard shapes and sizes to save time and costs. They may be arranged in a wide variety of ways without loss of spaciousness. Then as you add Dorm Line units, you achieve efficient, colorful, homelike rooms.

Installation is quick and easy—no time-consuming custom-built wardrobe or closet construction required. Easy

maintenance—certainly. Steel construction means “student-proof” abuse-resistance and durability...wardrobe frames never warp...doors won’t sag or stick...steel drawers assure smooth, quiet operation.

Money problems are easily solved. Simmons Dorm Line wardrobes, chests, desks—even beds—are built-in to qualify for *long-term* government financing. This all adds up to furniture that long outlasts the loan!



Students like to live with

Dorm Line's color, comfort, convenience

There's pleasant, homelike living designed into Simmons Dorm Line. Decorating ideas are unlimited because Simmons offers the widest variety of colors, finishes and fabrics ever made available in dormitory furnishings.

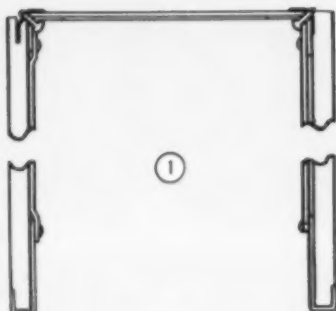
Starting with wardrobes—they may be finished with birch face or natural Novoply, sealed and lacquered...or painted in a choice of solid colors or two-tone combinations. Free-standing units feature a variety of colors—in finishes and fabrics. Chests are finished in color with tops of wood-grained Fiberesin.

Dorm Line offers many comfort features. There is correct-posture comfort in Simmons chairs...sleeping comfort on Beautyrest® mattresses. Complete Dorm Line rooms—with wardrobes, furnishings and accessories—make dormitory life convenient and efficient.

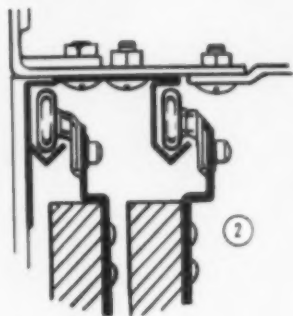
**Free-standing
DORM LINE units...**

In addition to wardrobes, Dorm Line includes desks, bookshelves, chairs, chests and beds. To qualify for long-term government financing, chests, desks—even beds—may be built in.

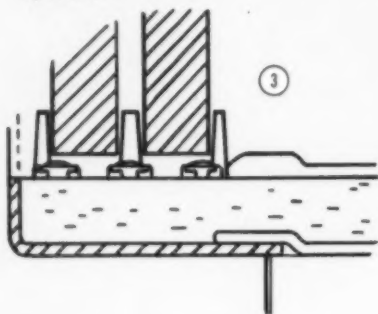
Dorm Line built-ins feature all-steel framework—sky-scraper-type construction of wardrobe has front frame wrap-around to protect exposed edges of paneling; attachment of paneling from the inside of the framework minimizes tension to eliminate possible warping of panels. Any type of outside paneling material may be used (birch-faced or natural Novoply offered as standards) without reducing basic strength and durability of the wardrobe.



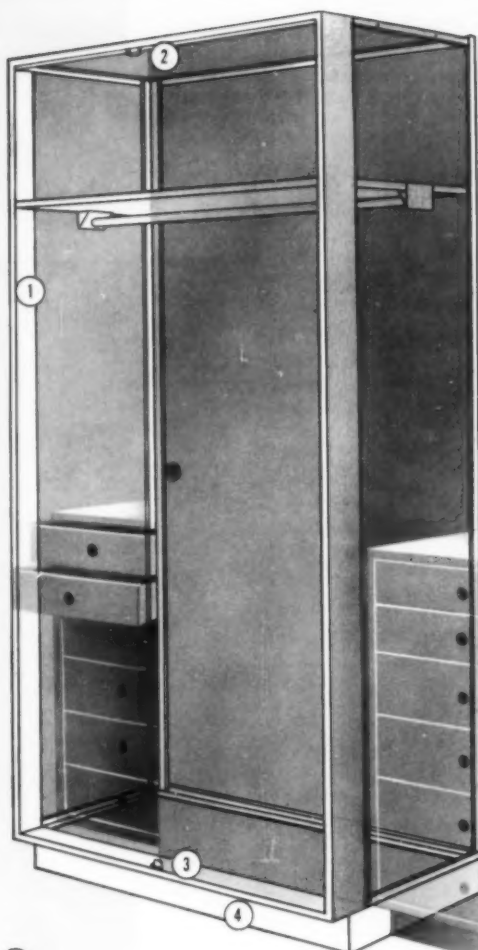
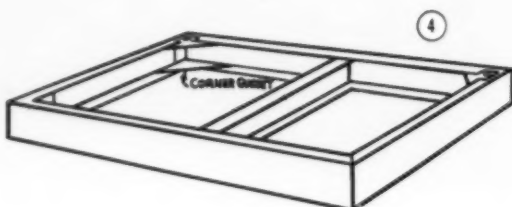
Easy-sliding doors stay that way because the extruded aluminum Stanley track assembly is secured to the steel framework and hanger brackets screw into the back facing of doors (not into top edging). Doors withstand 1500-lb. strength tests. This means track assembly and doors resist abuse; guide channels will not twist or bend; screws will not pull out. Track assembly also has nylon rollers for everlasting easy operation.



Triple guides at bottom of doors are securely anchored to wardrobe floor so doors glide smoothly. No single center-lip to break off or to split the door paneling if weight is thrown against it.



Sonderized steel base anchored to frame—securely bolted to frame instead of loosely attached by nails or screws; reinforced with gussets at each corner. Base does not require cove tile.



Everlasting "sky-scraper" construction of Dorm Line wardrobes is shown by this phantom view of the unit.

Here's the construction that safeguards your investment in Simmons Dorm Line

Compare Dorm Line furniture with any other and you readily see important differences in ruggedness and durability. Every construction detail contributing to long life is built into Dorm Line. You see this when you examine features of Dorm Line wardrobes, as shown above.

You know the kind of abuse dormitory rooms get—and

Dorm Line's resistance and ruggedness meet this problem in every way. This, of course, applies to wardrobes as well as Dorm Line free-standing units: chests, chairs, desks and sofa beds—all with steel construction and extra-durable finishes. Your investment in Dorm Line is truly a long-lasting one.

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SIMMONS COMPANY
CONTRACT DIVISION

Consider these 3 facts about future classroom air conditioning

1

YOU CAN INSTALL HerNel-COOL II UNITS NOW AT LITTLE OR NO EXTRA COST.

2

YOU CAN SWITCH OVER TO YEAR-ROUND AIR CONDITIONING AT ANY TIME IN THE FUTURE.

3

... AND WHEN YOU DO, YOU'LL SAVE 60% TO 72% OF THE AIR CONDITIONING COST!

HerNel-COOL II units can be installed in your new building now to function as unit ventilators—heating, ventilating and providing fresh-air (outdoor) cooling when required. But the piping, pipe insulation, condensate drainage system and control system installed as a part of the HerNel-COOL II system are *sized and engineered for air conditioning!* And the cost for all this versatile equipment is in the *same range* as equipment *not* adaptable to air conditioning!

When the decision is made to switch to year-round air conditioning, it's simply a matter of installing a Herman Nelson Packaged Liquid Chiller in the boiler room! That's all! This is done *without* disruption of classroom activities, *without* expensive building alterations.

The cost? About 55¢ per square foot—a savings of 60% of the cost of individual packaged commercial cooling units and 72% of the cost of a duct-type air conditioning system!

Install now at little or no extra cost, air conditioning later at a great saving. This approach to classroom thermal comfort has made such good sense to architects and educators that more than 250 schools have already installed HerNel-COOL II equipment.

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FREE HERMAN NELSON FACT KIT CONTAINS IMPORTANT DATA ON SCHOOL AIR CONDITIONING

Includes information on (1) how air conditioning affects the learning environment, (2) the cost of school air conditioning (including rule-of-thumb estimates you can use in your own planning), and (3) the equipment for school air conditioning.

SEND FOR YOUR FREE KIT TODAY!

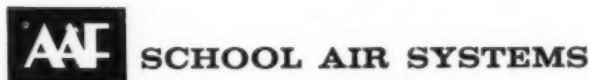
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FM-17 with solution tank.

has everything you've wanted
in a floor machine

**EASY, WHISPER-QUIET
OPERATION**

**FAST, COST-CUTTING
PERFORMANCE**

This new Clarke meets every need — fits the requirements of all types of buildings, all kinds of floors, traffic conditions and hours of usage. It's the result of years of research and it combines all the features everyone has always wanted in a floor machine — for instance:

- First, this new beauty does the complete job — it scrubs, polishes, steel wools, dry buffs, disc sands and grinds — even shampoos rugs and carpets.
- Its exclusive, power packed, totally enclosed motor, designed especially for the new Clarke, drives the brush at rated speed on any 15 amp circuit even when steel wooling wet floor seal or disc sanding.
- It's whisper-quiet — so quiet you'll wonder whether it's really working.

- It's perfectly balanced for easy handling.
- Its low overall height — only 10 7/8" — permits working beneath low furniture and fixtures.

Besides all these, the new Clarke offers such other important features as rugged construction, fully adjustable handle, dual control switch for operation with either or both hands, new electrically controlled solution feed for scrubbing and shampooing. And, the machine does every maintenance job better, faster, at lower cost.

Ask your Clarke distributor to prove it by demonstrating the new Clarke maintainer on *your* floors. Or, write today and we'll arrange this for you.

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College Housing Program: Our Baby's First Seven Years

GEORGE F. BAUGHMAN

Vice President for Business Affairs and Treasurer, New York University



A LITTLE more than seven years ago COLLEGE AND UNIVERSITY BUSINESS published an article entitled "What the College Housing Program Can Do for Your Institution." It was then a fledgling program with only 17 loans committed, and available funds amounting to only \$60 million. Today the program has reached almost the billion dollar mark. In terms of human benefit, the results are most impressive. At the end of 1958, 728 institutions had completed, had under construction, or had authorization for 828 projects, which will provide housing accommodations for more than 200,000 students and faculty members as well as providing numerous facilities of the service type, such as dining and student union accommodations.

It seems to me that it would be useful to look back these seven years and make some assessment of a program that has shown such astounding vitality, that has survived two Administrations, and that has resisted every effort to change its basic concepts.

Two judgments come immediately to mind: (1) that the program was soundly conceived by a wise and prudent Congress interested in a program that would really accomplish its primary purpose — to assist colleges and universities in providing housing and needed service facilities for their students and faculties, and (2) that it has been thoughtfully and skillfully administered on a flexible basis with full consideration having been taken of the wide diversity of American institutions of higher learning and with no governmental interference having been made in the internal affairs of the institutions.

The law itself sets forth the basic concepts of a reasonable interest rate and a long term of amortization. It provides quite properly that loans shall not be made if private funds are available on equal terms. Most important perhaps is the fact that the Commissioner of the Community Facilities Administration is given great latitude within the law for his administration of the program. Within the basic concepts of the statute he has the freedom and administrative agility to adjust and adapt his policies and procedures to differing circumstances and developing situations. We are indeed fortunate to have had this kind of legislation and to have had imaginative leadership of absolute integrity in charge of the program.

The two versions of the Omnibus Housing Bill have been reconciled in a Senate-House conference at this

writing, and the compromise bill includes \$225 million for dormitories, \$37.5 million for service facilities, \$37.5 million for the housing of nurses and interns, and a direct loan program for academic facilities in the amount of \$62.5 million, the latter being just half of the amount in the Senate bill. These reductions indicate that the Congress has tried very hard to stay within the President's budget and to forestall the President's veto on July 7.

The College Housing Program is one of the most substantial accomplishments of President Eisenhower's tenure in office. Support should not be withdrawn now when it is most needed and a "token" program of guarantees substituted under some other federal agency.

It is unfortunate that government accounting practices treat the approximately one billion dollars of loans as expenditures. In reality, the government will be fully repaid, plus interest and administrative overhead. Why substitute some other program that will *really* cost the government money and will reduce the initiative of private institutions to help themselves?

Of course, there are problems still to be worked out. In my judgment the agency is still not flexible enough in adjusting its type of pledge to the size and character of private institutions. Requiring a pledge of "full faith and credit" in addition to a mortgage and a pledge of specific income may in some instances restrict the borrowing capacity of an institution. College treasurers would be wise to discuss this point with their bankers and lawyers before entering into negotiations with the Community Facilities Administration.

The second problem involves the use of loan funds for movable furniture. The Comptroller General has ruled that movable furniture is not mentioned in the Act and is, therefore, ineligible. Built-in furniture, however, can be purchased with loan funds, which tends to inhibit the free choice of the institution in deciding whether it wants the movable or the built-in type. The choice should be an open one to be decided upon its merits, and a simple technical change in the law should be made at the next opportunity.

However, these are minor points that do not mar the splendid over-all accomplishments of the College Housing Program. And I believe that every college official who has participated in the program will join me in the hope that the next seven years of our baby's life will be as healthy and productive as the last seven.

LOOKING FORWARD

Administration of Student Loans

THE inclusion of student loan provisions in the National Defense Education Act has placed a tremendous responsibility on college and university administrators. If the full amount of student loans provided under Title II of the N.D.E.A. is approved by Congress, the student loan fund could, by June 1962, place some \$327 million in the hands of needy students.

To help meet the administrative problems created by this legislation, the College Entrance Examination Board has prepared a 42 page booklet entitled "An Aid to Administrators of National Defense Student Loans" which should serve as an invaluable administrative aid. The author, John F. Morse, vice president of Rensselaer Polytechnic Institute, Troy, N.Y., prepared the book in response to a suggestion by the Fund for the Advancement of Education. The Fund has been responsible for financing the booklet and the College Entrance Examination Board is publishing and distributing the booklet to colleges.

Any loan program is difficult to administer and requires carefully worked out procedures to assure proper allocation and subsequent repayment. Certain provisions of the federal program may serve to complicate the problems. Some of these complications, as enumerated in the booklet prepared by Mr. Morse, are as follows:

1. Loans are made to needy students only.
 2. Special consideration is to be given to potential school teachers, and to students with particular talents and abilities.
 3. Cancellation of a loan, at 10 per cent a year, is provided for students who enter public school teaching, with a maximum cancellation of 50 per cent.
 4. Cancellation of the outstanding balance of the loan is provided in case of death or disability of the borrower.
 5. The repayment of loans is stretched over a 10 year period, if the borrower so elects.
 6. Repayment schedules and interest charges are suspended for full-time attendance at college or graduate school for one year after leaving, and for military service.
 7. As a result it may be 21 years from the time a loan is granted to a freshman until final repayment is made — four years of undergraduate work, three years of graduate work, one year of grace, three years of military service, and 10 years of repayment. Although such a situation is admittedly atypical, loans running for 15 years until final repayment will not be unusual.
 8. As opposed to previous college loan programs, this program will require detailed reports to an outside agency.
- It is obvious that a large number of colleges and universities are not presently equipped or staffed to administer such a long-range program. It will require a substantial in-

vestment on the part of the institution to provide for the general processing, accounting and collection procedures required. It is estimated that an average size college may be handling from 2500 to 3000 open accounts with the loans requiring an average period of 15 years for administration.

Fortunately, in former years the collection or repayment record of student loans operated by colleges has been excellent. It will remain to be seen whether the colleges can cope with the tremendous size of the new National Defense Student Loan Program. Each college has established its own procedures in the past, but under the N.D.E.A. program certain uniformity in system will be required, and this may cause a period of considerable confusion as the individual institution establishes the program.

It is expected that the N.D.E.A. may have as significant an impact on education as the Morrill Act of 1862. Probably the most significant aspect of the program is that responsibility for administration of the student loan aspect of the N.D.E.A. is placed unequivocally on the colleges themselves. The integrity of the institution is at stake; it cannot afford to jeopardize its credit or good faith through careless administration.

The Conserv Plan

THE Associated Colleges of Illinois, a group of more than 20 private liberal arts colleges in the state, has operated for several years as a group to work collectively in fund raising efforts for member institutions. In this respect it is similar to other associations of private colleges now operating in more than 30 states.

The Illinois group recently announced the establishment of "The Conserv Plan," which will provide a service by the association to help conserve resources of the institutions. Under the new program, the Associated Colleges of Illinois will add administrative personnel to its staff to serve as consultants to the member institutions in the areas of business office administration, food service, and buildings and grounds operations.

Irwin K. French, executive director of the National Federation Consulting Service, has resigned his post to accept appointment as the consultant on business office administration for the Associated Colleges of Illinois. Announcement of consultants in food service operation and buildings and grounds administration is expected shortly.

In taking this step, the Associated Colleges of Illinois has accepted a responsibility for the improvement of small college administration that may have far-reaching consequences in raising the level and standard of college administration within a state or region. The organization is to be commended for its leadership and foresight.

THE urgent necessity for improving faculty salaries is leading many colleges and universities to examine their instructional programs critically. In many cases funds for higher salaries may be found through better use of the time and energy of capable members of the present teaching staff.

With a fixed amount of money available for faculty salaries, the average salary per faculty member will vary indirectly with the size of the staff. The staffing pattern for the instructional program therefore needs to be examined to see if effective service could be rendered by reducing the size of the faculty. More happily, an increased enrollment can possibly be served without additional faculty members being added. The enlarged salary budget permitted by increased tuition fees can then be distributed as salary increases to capable staff members.

In many colleges and universities faculty salaries are lower than they might be because there are more faculty members than necessary for effective service to students. Institutional officials usually hesitate to reduce the number of faculty members, for reasons of tenure. But when enrollment is not increasing, it may be desirable to question the retention of some nontenure faculty members, if funds devoted to their salaries could be better used to improve the salaries of grossly underpaid and deserving professors.

Opportunity To Raise Salaries

When the enrollment is increasing with a corresponding increase in total income from tuition fees, a valuable opportunity arises for raising faculty salaries. As a rule, however, not all the increased tuition income can be devoted to improving faculty salaries for other areas of operation — the library, the registrar's office, and the business office, for example — are pressed by the increased volume of their operations. What may happen to the average faculty salary under varying conditions of enrollment, tuition fee income, and instructional staffing patterns involves consideration of the "break-even point" for a given set of conditions.

The break-even point may be defined as that volume of operation, expressed in unit terms, that permits the

BREAK-EVEN POINTS in the Organization of Instructional Programs

JOHN DALE RUSSELL

Director, Office of Institutional Research, New York University

instructional program of the institution, or some division thereof, to be self-sustaining on the basis of income from student fees and other stable sources of current support under certain given conditions.

The break-even point for an instructional program in a college or university or any unit thereof may be expressed in terms of three different measures:

1. The student-credit-hour production per full-time-equivalent member of the instructional staff. (One student credit hour is one student in a one-credit course; 35 students in a three-credit course equals 105 student credit hours; an instructor who teaches four classes, each for three credits, each of two semesters, with an average of 30 students in each class, produces 720 credit hours annually.)

2. The instructional salary expenditure per student credit hour.

3. The average size of classes, the average being weighted according to the number of credits each class carries.

In order to fix the break-even point in terms of any of the three measures, certain constants must be known or assumed. For the first two measures the constants that must be known or assumed are: (1) the dollar amount of the fee that the student, on the average, pays for one credit hour of in-

struction; (2) the percentage of the total support of the educational and general expenditure budget derived from student fees; (3) the percentage that total payments for instructional salaries are of the total educational and general expenditures of the institution, and (4) the average salary for a full-time-equivalent member of the instructional staff.

For the third measure of break-even point, average size of class, one additional constant must be known or assumed, namely, the average number of credit hours of classes taught annually by a full-time member of the instructional staff.

How Determined

As an illustration of how these constants determine the break-even point, specific values may be assigned to each and the calculation carried through.

Let it be assumed that the tuition fee averages \$20 per student credit hour; this would be equivalent to a full-time annual tuition fee of \$600 if the normal load of a full-time student is 30 credit hours annually. Assume further that 60 per cent of the support of the total budget for educational and general purposes is derived from student fees. Assume further that instructional salaries require 40 per cent of the total educational and general

Mathematical Formulas for Determining Break-Even Point

Let UB = University budget for educational and general purposes.
 Let SFP = Percentage of support of university budget for educational and general purposes derived from student fees.
 Let ISP = Percentage that instructional salary expenditures are of university budget for educational and general purposes.
 Let F = Tuition fee per student credit hour.
 Let S = Average salary per full-time-equivalent member of instructional staff.
 Let SEC = Instructional salary expenditure per student credit hour produced.
 Let SCH = Student-credit-hour production per full-time-equivalent instructor.
 Let ASC = Average size of class (weighted for number of credits for each class).

Let TH = Credit hours of teaching annually per full-time-equivalent instructor.

$$\text{Then: } \frac{UB \times SFP}{F} = \frac{UB \times ISP}{S} \times SCH.$$

$$\text{This reduces to: } \frac{S}{F} \times \frac{SFP}{ISP} = SCH.$$

$$\text{Also: } \frac{SCH}{TH} = ASC, \text{ so } \frac{UB \times SFP}{F} =$$

$$\frac{S}{S} \times ASC \times TH.$$

$$\text{This reduces to: } \frac{S}{F} \times \frac{SFP}{ISP \times TH} = ASC.$$

$$\text{Also: } \frac{S}{SCH} = SEC, \text{ so } \frac{UB \times SFP}{F} =$$

$$\frac{SEC}{ISP} \times F = SEC.$$

$$\text{This reduces to: } \frac{SEC}{SFP} \times F = SEC.$$

budget. The figure for average salary for a full-time member of the instructional staff could be set at any desired amount, but for the purposes of this illustration let it be assumed that the figure is \$7000 for the academic year.

If the instructional salary expenditures are 40 per cent of the total educational and general budget, and if the average salary for a full-time member of the faculty is \$7000, the institution must find \$17,500 in total support for its educational and general budget for each full-time member of the instructional staff (40 per cent of \$17,500 is \$7000). If 60 per cent of the \$17,500 is to be derived from student fees, the student fee income per full-time-equivalent faculty member must be \$10,500 (60 per cent of \$17,500). If the institution is to derive \$10,500 in support from student fee per full-time-equivalent faculty member, there must be a production of 525 student credit hours per full-time-equivalent instructor (\$10,500 divided by \$20 per credit hour equals 525).

Thus the break-even point is a production of 525 student credit hours per full-time-equivalent instructor, under the assumptions that were made. Any operating unit of the instructional division that has a lower student-credit-hour production per full-time-equivalent faculty member must be balanced by another unit or units with an equal volume of production at a

correspondingly higher rate than 525 student credit hours per full-time-equivalent faculty member, if the institution is to operate on a balanced budget and remain solvent, under the conditions assumed.

The figure for student-credit-hour production determines the number of faculty members needed on the staff for any given volume of instructional production. Thus if the institution, in the example being used, has an enrollment of 1750 full-time-equivalent students, who annually carry an average course load of 30 credit hours each, a total of 52,500 student credit hours of instruction must be provided. A faculty of 100 full-time-equivalent members would then be needed for the production of an average of 525 student credit hours per faculty member. If more than this number of faculty members are used, the average student-credit-hour production per faculty member will fall.

To continue the example, the production of 525 student credit hours per full-time-equivalent faculty member at an average salary of \$7000 would involve an instructional salary cost of \$13.33 per student credit hour produced. This is the break-even point in terms of instructional salary expenditure per student credit hour. Any unit of the institution operating at a higher cost per student credit hour produced must be balanced by an

equal volume of student-credit-hour production at a correspondingly lower rate per student credit hour, if the institution is to remain solvent in the operation of its educational program.

To determine the break-even point in terms of average size of class, one additional assumption must be made, namely, the average number of credit hours of courses taught annually by an instructor.

If it is assumed that the average teaching load per instructor is 24 credit hours per year (12 credits each semester) the break-even point for average size of class, in the example being used, is 21.9 (525 student credit hours divided by 24 hours of teaching per year). If the faculty members teach an average of 30 credit hours per year (15 per semester), then the break-even point for size of class is 17.5. If the instructional load is arranged so that each instructor teaches only 20 credit hours per year (10 per semester), the average size of class will be 26.3.

The relations among the various constants and measures described and illustrated may be generalized in terms of mathematical formulas as shown at the top of the page.

Any of the factors or measures may be treated as a constant in the foregoing equations. If all but one of the factors or measures are treated as constants, the equations may be solved for the remaining factor as an unknown. Thus the equations could be used to derive the amount of the fee that must be charged students, if assumptions are made about the other factors or constants, or to derive the average faculty salary, or to determine the percentage of support of the educational and general budget that must be derived from nonstudent-fee sources, or to determine the number of faculty members needed.

The formulas described relate only to the instructional program. They assume that in the financial accounting there is careful discrimination between expenditures of salaries for instruction and for other functions usually not expected to be supported by student fees, such as research and public service. The formulas also assume that the personnel system of the institution accounts with equal discrimination for the assignment of faculty time to instruction and to other functions. ■

The Tenure Committee and the Courts

T. E. BLACKWELL

Educational Management Consultant, Washington University, St. Louis

DR. W. W. WORZELLA was employed as professor of agronomy at the South Dakota State College. He was discharged by the board of regents on Jan. 11, 1958, after the board had concluded an extensive investigation into the personnel and administrative affairs of the college.

Refuses To Grant Petition

Dr. Worzella filed a petition for a writ of mandamus to compel the state board of regents to reinstate him, contending that he had acquired permanent tenure under a policy approved by the board and that he could be dismissed only after a vote of the college tenure committee. The supreme court of South Dakota, in refusing to grant his petition,¹ held that the board could not delegate its constitutional duty to control the affairs of the institution to a tenure committee. The following is an excerpt from the opinion of the court:

"The exact meaning and intent of this so-called tenure policy eludes us. The vaporous objectives, purposes and procedures are lost in a fog of nebulous verbiage. We gather from it, in general, that a faculty member who is retained on the staff of State College for over three years gains permanent tenure. He cannot thereafter be divested of tenure unless a complaint is filed against him by the president of the college. He is then entitled to have notice of hearing, and a hearing before a tenure committee consisting of seven faculty members.

"Apparently the board could not discharge or remove a faculty mem-

ber with tenure for any reason if the president failed or refused to file a complaint or if the tenure committee and president failed or refused to recommend dismissal. We believe this to be an unlawful abdication of the board's exclusive prerogative and power."

Dr. Worzella, in his petition, had relied upon precedents established by two prior decisions involving the question of permanent tenure. The first of these, decided² by the supreme court of Montana in 1939, held that a professor of library science at Montana State University was entitled to a writ of mandamus to compel the state board of education to reinstate him. The court ruled that tenure regulations, duly adopted by the board, had the force of law. Therefore, the professor had acquired permanent tenure under its provisions, despite the fact that he had been offered only year-to-year contracts and that the tenure clause on the reverse side of the contract for the sixth year had been stricken out before it was tendered.

The second case³ raised the question as to whether the board of regents of the University of Nevada had acted without or in excess of its jurisdiction in discharging an associate professor under tenure. The supreme court of Nevada agreed with the Montana court that a tenure policy, duly adopted by the governing board of a public institution of higher education, has the full force and effect of statute of the legislature until rescinded, and that, as such, it be-

comes a part of every contract offered the faculty while it is in force.

However, the South Dakota supreme court differentiated these two judicial decisions from the case before it, involving Dr. Worzella, as follows:

"Neither case involved the question of delegated, surrendered or diminished authority to dismiss or discharge a faculty member. In both Montana and Nevada the governing boards reserve the ultimate power to remove any faculty member of tenure. Their power of dismissal is not dependent upon the prior action or recommendation of any subordinate body, committee or person. This distinction is of vital importance."

South Dakota Case

This recent South Dakota tenure case should be read in the light of a 1938 decision⁴ of the U. S. Supreme Court. It declared that a public school teacher may acquire, under a state tenure law, vested contractual rights that cannot be withdrawn or impaired by subsequent legislative action. Once vested, such contractual rights are protected by that portion of Section 10, Article I of the Constitution of the United States, which reads "no state shall . . . pass any . . . law impairing the obligation of contracts."

The supreme court of Indiana had held⁵ in 1937 that a public school teacher could not acquire vested contractual rights by virtue of a state statute conferring the status of permanent tenure upon those who have taught for five or more successive

²State v. Ayres, 108 Mont. 547, 92 P. 2d. 306 (1939).

³State v. Board of Regents, 70 Nev. 144, 261 P. 2d. 515 (1953).

¹Worzella v. Board of Regents of South Dakota State College, 93 N.W. 2d. 411 (1958).

⁴Indiana v. Brand, 303 U.S. 95 (1938).

⁵State v. Brand, 214 Ind. 347, 7 N.E. 2d. 777 (1937).

years in the public schools of the state. The following is an excerpt from the opinion of the court:

"The legislature, in enacting school laws, exercises one of the functions of sovereignty. The right to control public policy, in respect to the management of schools, cannot be contracted away by one legislature so as to fix a permanent public policy, unchangeable by successive legislatures."

The Supreme Court of the United States reversed the decision of the state court. Mr. Justice Roberts de-

livered the majority opinion of the court, of which the following is an excerpt:

"It is established that a legislative enactment may contain provisions which, when accepted as the basis of action by individuals, become contracts between them and the state or its subdivisions within the protection of Article I, Section 10."

Mr. Justice Black, in his dissenting opinion, declared:

"The Indiana constitution gives the state legislature complete authority

to control the public school system. The state supreme court declares that, under this authority, the legislature can change school plans as often as it believes a change will promote its interest of education, and, for mistakes or abuses, it is answerable to the people, but not to the courts.

"I believe the people of Indiana, if they prefer, have the right under the federal constitution to entrust this important public policy to their elected representatives rather than to the courts." ■

What's involved in a college introspection

Conducting the Self-Study

Third installment by JOHN FORBES

Assistant Secretary, North Central Association of Colleges and Secondary Schools, Chicago

THE first five elements that should be present and receive adequate treatment in an effective college self-study were presented last month. These were: public demand for a study, authorization of a formal study and then, under the second phase, conducting the self-study, institutional problem solving, coordination and instructional policy making. This month's installment also covers conduct of the self-study.

Element 6. Planning resources pool. Fundamental to the growth and development of a college is the growth and development of people who have a stake in it. It is difficult, indeed, to see how an institution of higher education can really alter its objectives and activities for the better without its people altering their attitudes and behaviors.

To understand how institutions grow we need first to understand growth in individuals. One commonly accepted explanation of how people grow goes something like this: (1) People perceive problems; (2) they envision and examine alternative solutions to their problems; (3) they tentatively select solutions to their

problems; (4) they try out new behaviors specified by their tentative solutions; (5) then, if the solutions solve the problems satisfactorily, they alter their behaviors in such a way as to habituate the solutions. The efficiency with which people grow depends in large part upon their ability and opportunity to perceive problems and upon their ability and opportunity to examine alternative solutions to them.

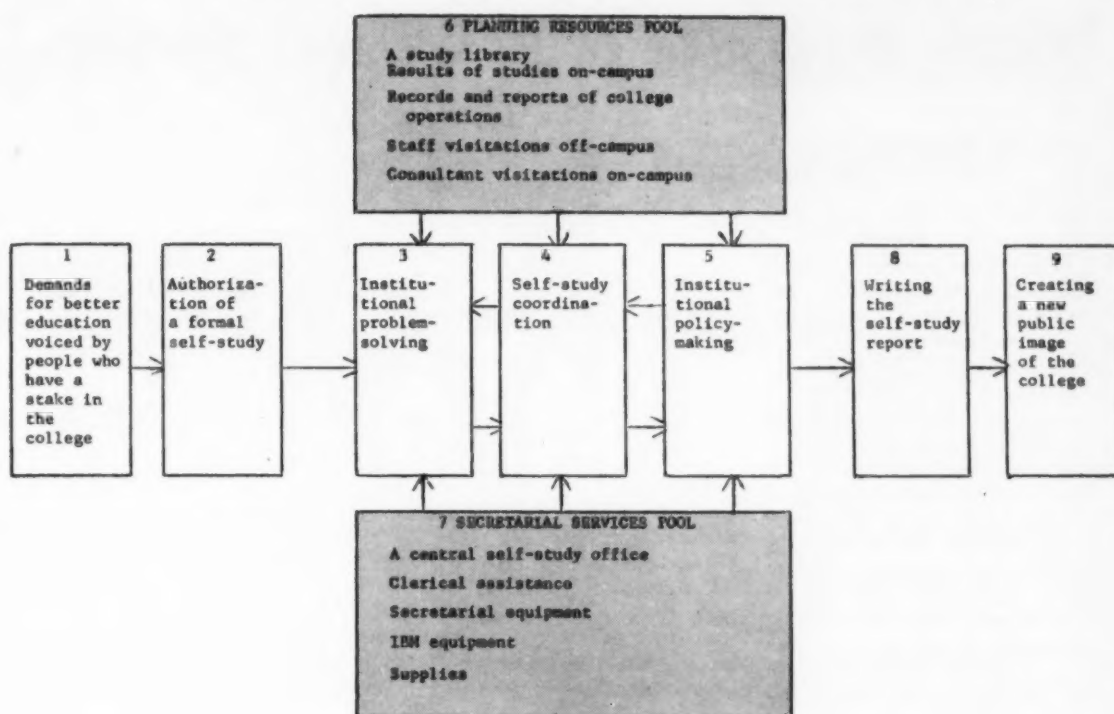
In an effective college self-study, therefore, a planning resources pool is of inestimable value. For such a pool makes available to the study staff relevant intelligence and ideas of all kinds pertaining to college operations which lie both "inside" and "outside" an institution. Thus the pool puts at the disposal of self-study problem solvers, study coordinators, and policy makers the sort of stimulation they need to identify institutional problems pervasively and see alternative solutions to their problems comprehensively. In a very real sense the planning resources pool serves to energize individual growth and development; hence, it is of strategic importance in effecting institutional growth through self-study.

Among the planning resources we have found most helpful to colleges engaged in studying themselves are: (1) a reference library of study literature, other informational materials, and audio-visual aids acquired from outside the institution; (2) results of studies on campus; (3) records and reports of college operations; (4) staff visitations off campus to other colleges and elsewhere, and (5) consultant visitations on campus from people in other schools, from educational agencies, or from elsewhere in the social order.

Element 7. Secretarial services pool. Institutional self-evaluation almost always involves a fantastic amount of paper work, an abundance of data processing chores, and a gigantic task of integrating the study efforts of everyone involved. Common sense demands that rather explicit provision be made early in the self-study project for certain secretarial services to be available to the study staff.

We often wonder how many great ideas for educational advance have been lost to our profession because a piece of paper, a typewriter, a duplicating machine, or a typist were not

A PRELIMINARY FRAME OF REFERENCE FOR DISCUSSING COLLEGE SELF-STUDY



available at the right moment to preserve them. We also think about what a more penetrating and meaningful job of evaluating institutional data might have been accomplished in some self-studies if machine accounting equipment had been available to lessen the burden of tabulation.

Oddly enough, few institutions have bothered to designate a self-study office as a "home base" or "nerve center" during their self-evaluation ventures. Yet we have found that such a space, centrally located in the traffic pattern of an institution, can be a major factor in spreading information and understanding during the course of a self-study.

This central office need not be swank. Usually, the following will suffice to record the progress of introspection: a problems, proposal, policy file; a library of study resources; a desk or table, and a bulletin board showing who is studying what, who is going off or coming on campus, and when. Such office space is important because it serves to throw many different members of the study staff together in an informal way who otherwise might not meet one another. This,

in turn, leads to a good deal of information sharing and integrated understanding about what is going on throughout an institution that is engaged in studying itself.

All of these secretarial services can do much to eliminate the drudgery of conducting a self-study. Our experience has been that the investment required to provide them pays off handsomely in high morale among members of the study staff.

Stimulating imaginative problem solving, proposing exciting changes in the operation of a college, and making adequate policy changes to improve educational effectiveness on a campus are not easy, well regulated undertakings. Educational problems initially identified in a study project quite often need to be subsequently reconsidered. More adequate problem inventories are almost always constructed with the passage of time. Proposals for institutional change presented in their first form frequently are rejected. They require further study and resubmission in a better form. In all of this re-study, human conflicts inevitably arise. Study coordinators must be alert in resolving interpersonal disputes.

More often than not some important problems that face an institution will just have come to light when proposals for the solution to others are being approved as new college policy. *Institutional growth through self-study does not occur in a neat, lock-step order. The demands for better education that give rise to college introspection are dealt with piecemeal and randomly in effective self-study, not in a sequential manner.*

Despite the apparent chaos and backtracking in genuine introspection, most of the pressure to improve the educational effectiveness of an institution is somehow relieved by this process:

The chain reaction of human dynamism unleashed when people seek to solve problems they see facing their college gradually spends itself. As new policies are adopted, order emerges out of the chaos. When it becomes apparent to the majority of people involved in study that this moment has arrived on their campus, it is then time to sum up what has happened to the institution as a result of introspection by writing a self-study report. ■

(To Be Concluded Next Month)

What's Happening to Retirement Benefits?

PAUL A. WALGREN, Controller, University of Southern California, Los Angeles

WHEN social security was made available to educational institutions it was hailed as a second layer to our retirement cake.

To many of the older staff members it was not only a second layer to their cake, but also provided a generous amount of frosting. It was possible for individuals who became eligible for benefits after 18 months of social security to recover their entire tax with their first benefit check. A person who had paid social security taxes for three years could recover the entire tax with two monthly benefit checks. In addition, they were eligible to receive benefits for their wives without their own benefits being reduced. This is indeed frosting since under T.I.A.A. and other annuity plans any election that provides benefits for a spouse reduces the amount of the annuity of the staff member.

In adopting social security many institutions revised their contributions to existing retirement plans by reducing premium payments to these plans by the amount of social security taxes assumed by the university for each participating staff member. They also permitted the staff member to make a similar reduction. For purposes of this discussion, such institutions will be referred to as Type A schools as contrasted to Type B schools, which maintained their full premium payments to T.I.A.A. and other plans.

For the older staff member these reduced premiums to T.I.A.A. did not materially reduce their annuity income.

Based upon the social security tax schedule of 1951, the following table reflects, at various ages, the amounts that T.I.A.A. annuities would be reduced by a portion of T.I.A.A. premiums being diverted to the payment of the social security tax of the university and the staff member:

TABLE 1

Age Jan. 1, 1951	Reduced Annual T.I.A.A. Annuities
35	\$533
40	399
45	260
50	179
55	100
60	43

Since 1951, significant changes have taken place that reduce T.I.A.A. annuities even more. The scheduled tax rate changes have been advanced and increased in amount, and the salary base upon which taxes are computed has been raised from \$3600 a year to \$4800. The following table reflects these changes:

TABLE 2

Age Jan. 1, 1951	Original Annuity Reduction	Revised Annuity Reduction	Effect of Changes in Law
35	\$533	\$866	\$333
40	399	633	234
45	280	425	145
50	179	251	72
55	100	132	32

It can be seen that, in the case of a person who was 35 years old on Jan. 1, 1951, his reduction in T.I.A.A. annuity income approximates the amount of social security benefits as originally established in 1951 (\$960). The second layer of his retirement cake has shrunk considerably.

Since 1951 social security tax rates have been changed twice. There is no reason to expect that they will not be changed in the future with similar effects on retirement income.

Tables 1 and 2 reflect what has happened to staff members of Type A schools who were employed as of Jan. 1, 1951. It is interesting to see what will happen to future employees of Type A schools. Their entire T.I.A.A. accumulation will be subject to the higher tax rates and the increased salary base.

Table 3 reflects, at various ages, the amount of annual T.I.A.A. annuity income that can be purchased

with premiums equal to the amount of social security taxes scheduled to be paid by the university and the staff member in future years:

TABLE 3

Age Jan. 1, 1960	Annual Annuity
35	\$1,154.00
40	886.00
45	649.00
50	439.20
55	253.60
60	107.20

If it is assumed that, prior to the advent of social security, the retirement programs of Type A and Type B schools were comparable, the following conclusions are derived:

1. Table 1 indicates that staff members of Type A schools are at a comparative disadvantage over staff members of Type B schools.

2. Table 2 indicates that the comparative disadvantage has been increased because of changes made in social security laws since Jan. 1, 1951.

3. Future changes in social security laws appear to be a reasonable expectation with additional adverse effects to staff members of schools of the Class A type.

4. Table 3 indicates that schools of the Class A type will be at a disadvantage in competing with Class B schools for the faculty and staff necessary to meet an increase in student population.

5. It might be well, therefore, for schools of the Class A type to review their retirement programs. If a Class A type of school became a Class B type of school as of Jan. 1, 1960, the increased T.I.A.A. annuities of its staff members would be reflected by Table 3. Based upon currently scheduled tax rate changes, the maximum annual university cost per staff member would be as follows:

1960-62	\$144
1963-65	168
1966-68	192
1969 and thereafter	216 ■



RESIDENCE HALLS

A 22 page portfolio presenting . . .

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Suite plan proposal

College housing in Deep South

Girls' quarters in urban setting

Low-cost hall for rural college men

Apartments for married students

Advance planning for food service

Are your dormitories fire-safe?

Survey of trends in residence hall

CAMPUS TOWN, U.S.A., is a very substantial city. It has a population of more than 3 million students, some 850,000 (28 per cent) of whom live in college owned residence halls. And on about half of the campuses of America are modest ventures in faculty housing. More college administrations are lingering on the fringe of this fringe benefit.

COLLEGE AND UNIVERSITY BUSINESS has just tabulated a survey of current Campus Town practices in regard to residence halls. To a questionnaire mailed last spring there came a 43 per cent response. Some of these colleges are community or junior colleges and have no need for dormitories.

When the cut-off date came for summarizing the returns, only 652 were available and usable; this represents 32.7 per cent of the original mailing. An additional 128 usable returns have filtered in since, and their data will be processed and incorporated into a later report. The composite picture presented here, however, would appear to be a reliable likeness.

More Built-Ins, More Draperies

Several trends emerge. The movement toward built-in furniture in student rooms is the most significant. This change has been influenced by the provisions in the federal College Housing Loan Program, which make it possible for built-in equipment to be considered as part of the total loan.

Draperies are becoming increasingly prominent in the residence hall picture. In fact, the old roller shade may soon go the way of the defunct roller towel. Not only the greater expanse of window area — perhaps an entire window wall — but also the use of drapery materials for color, texture, design and acoustical properties account for the turn from roll-up shades to draw draperies.

The survey reported on here was set up to give comparative figures for the year beginning September 1948 and the year beginning September 1958 and also between the periods 1946-53 and 1954-60. An earlier COLLEGE AND UNIVERSITY BUSINESS survey makes such a comparison possible.

It is not surprising to find a 12.7 per cent jump in enrollments since 1948. Nor is it surprising to find that, despite the substantial residence hall construction program in recent years, the percentage of students housed by colleges remains about the same.

The average campus today has 3.6 residence halls for men and 3.5 residence halls for women. Tomorrow's figures will be substantially larger, as 73 per cent of the institutions reporting (425 colleges) are planning to build a total of more than 800 new dormitories within the next five years. These dormitories will house 157,821 students.

The men's halls reported on in the survey have an average capacity of 120 men; the average capacity for women's halls is 100. The average capacity for all men's halls per responding colleges is 428; for women, 353.

Not all residence halls have dining facilities, of course; 302 respondents report a total of 712 dining hall units (dining rooms and kitchen) in residence halls with a total seating capacity of 163,355. This represents an average of 2.4 residential dining halls per campus, each with a seating capacity of 229. The seating capacity per campus ranges from a modest 10 to 4424, with an average seating capacity of 541 for all residential dining halls per campus.

Nonresidential dining hall units are reported by 398 colleges; these have a total seating capacity of 174,105 students — in student unions, snack bars, and the like. These units may seat 10 or 3000. The average seating capacity for all nonresidential dining hall units per campus is 437.

The picture has changed in the two periods surveyed (1946-53 and 1954-60). Fewer residence halls now have dining facilities. For men's halls the percentage has dropped from 16 to 14; for women's, from 28 to 25.

The survey requested information on fraternity and sorority housing. A total of 154 colleges reported 1879 fraternity houses with a total capacity of 51,548. The average number of such houses per responding campus is 12.2. The average census per house is 27.4 students. Total fraternity housing per campus is 335 students.

Sorority houses are fewer. There were 478 houses with a total capacity of 14,725 reported by 62 respondents. The average house has room for 23.8 girls; the average sorority housing per campus is 308.

An acute problem with a college or university that operates residence halls is parking space for student, faculty and visitors' cars. In this survey, 529 colleges report 3100 separate parking areas, with a total capacity of 305,327 automobiles.

The average number of parking areas per campus is 5.9; the average parking capacity per campus is 577 cars. The majority (57 per cent) report that parking is restricted to students and faculty.

Buildings Larger, But Not Higher

Turning now to comparative figures for two periods on which information has been gathered, we find that both men's and women's residence halls are getting bigger but not higher. In general men's halls have much larger floor areas than women's halls. The average number of floors per residence hall is three plus.

A large majority of institutions favor placing two students in a room. In most cases single and double rooms — and occasionally triple occupancy — are provided in the

facilities, 1959

same residence hall, which accounts for the total percentages reported below being in excess of 100.

Here are the tabulations: In 1946-53, 49 per cent of men's residence halls had some single rooms available; 82 per cent had double rooms; and 21 per cent had triple rooms. In the 1954-60 period the percentages are as follows: 39 per cent, single; 90 per cent, double; and 13 per cent had triple.

Women's residence halls planned during the 1946-53 period had these accommodations: 53 per cent, single; 97 per cent, double; and 19 per cent, triple. In 1954-60 the percentages, respectively, are 97 per cent, single; 87 per cent, double; and 20 per cent, triple.

Table 1 shows the availability of activity rooms in both men's and women's residence halls and contrasts the two periods. Note the larger percentage of men's halls that now have special music rooms, compared with the earlier five-year period.

In the lounge areas these days, the trend is toward TV; most radio listening is being done in the bedrooms.

Earlier in this report the swing toward draperies as window coverings was commented upon. Back in 1946-53, draperies were used at the windows in only 25 per cent of the men's halls and 45 per cent of the women's halls. Venetian blinds were installed in 39 per cent of the accommodations for men and in 42 per cent of the women's accommodations. The remainder had roller shades.

Today draperies are being used in 59 per cent of the men's halls and 64 per cent of the women's halls. Venetian blinds are used in 36 per cent of the men's halls and 43 per cent of the women's. The rest have roller shades, although some respondents checked more than one type of window covering.

Plumbing Installations and Laundry Facilities

What about lavatories in the students' bedrooms? There seems to be a decline of such installations in the men's halls. In the earlier CUB survey, 44 per cent of the men's halls had bedroom washbasins; today it is 20 per cent. The change has been small in women's rooms: 33 per cent during 1946-53 and 32 per cent during 1954-60.

Plumbing fixture ratios remain about the same in the two periods of comparison: eight students per shower head fixture; six men students and 4.6 women students per lavatory. The same general percentages prevail for water closets and, in men's halls, for urinals.

The trend toward providing laundry facilities for the students is noticeable. In the earlier period 50 per cent of the men's halls were so equipped and 93 per cent of the women's residences. Today the men's halls are up to 60 per cent and the women's halls remain at 93 per cent.

Table 1 — Special Activity Areas Provided in Residence Halls

	1946-53		1954-60	
	Men (51 resp.) % checking	Women (32 resp.) % checking	Men (204 resp.) % checking	Women (161 resp.) % checking
Snack bar	24%	25%	21%	20%
Lounges	84	100	94	94
Bowling alleys	10	—	9	1
Billiard room	47	53	56	60
Recreation room	16	31	9	16
Music room	2	12	10	17
Typewriting room	0	6	2	2
Storage room	80	91	83	91

Table 2 — Furnishings in Student Rooms Supplied by College Today as Compared to 10 Years Ago

Item	1946-53		1954-60	
	Men (51 resp.) % checking	Women (32 resp.) % checking	Men (204 resp.) % checking	Women (161 resp.) % checking
Bed	96%	100%	97%	96%
Dresser	86	93	83	93
Desk	98	97	91	92
Cabinets	65	65	65	70
Straight chair	92	91	97	96
Easy chair	23	39	39	40
Mirror	86	93	92	97
Wastebasket	76	50	70	58

Free Standing vs. Built-In*

Item	1946-53				1954-60			
	Free Standing		Built-In		Free Standing		Built-In	
	Men	Women	Men	Women	Men	Women	Men	Women
Bed	97%	87%	6%	7%	77%	83%	16%	17%
Dresser	81	80	20	20	47	55	64	53
Desk	90	90	12	10	61	70	47	38
Cabinets	42	43	67	62	7	11	100	100

*Percent of those checking items supplied by college. In some cases respondent checked both free standing and built-in, so percentage is greater than 100.

There appears to be an average of three washing machines per residence hall and approximately 2.5 automatic driers. The women have six ironing boards per laundry room installation; the men, four.

To handle the cost of maintaining these laundry rooms, most residence halls have installed coin operated machines. In the earlier period (1946-53) 63 per cent of the men's halls had coin operated machines and 83 per cent of the women's halls.

Today, despite the fact that the average residence hall has coin operated washers and driers, 30 per cent or more of these institutions report that the campus is served by a college operated commercial type of laundry. Usually this laundry is operated in a separate building.

Trend Toward Linen Rental Service

The move toward linen rental service is worthy of comment. At present 39 per cent of men's and women's residence facilities utilize this service. In 38 per cent of the men's halls, and in 33 per cent of the women's halls, use of a linen rental service is mandatory.

Table 2 shows the type of furniture and other equipment that colleges furnish in the individual student rooms. The table also shows current practice in regard to free standing and built-in furniture, a notable trend toward

(Continued on Page 58)

THE general principle that residence hall responsibility rests jointly with the business officer and the dean of students, or student affairs officer, is basic in the philosophy of residence hall operation. Let us attempt to clarify and delineate specific areas of responsibility of the two offices in the implementation of that principle.

The manager of residence services is responsible to the business officer and to the student affairs officer. His line of responsibility, in general terms, is to the business officer for the physical operation and maintenance of the residence halls. His line of responsibility is to the student affairs officer for the educational aspects of the residence halls.

Generally, responsibilities within each of the residence halls should be divided as is indicated in the list on the opposite page. It is not intended to be exhaustive. Questions that may later arise concerning areas of responsibilities not covered in the list should be referred to the housing committee for decision and/or review.

Housing Committee

The housing committee should be made up of the following officials: (1) manager of residence services as chairman, (2) business officer, (3) student affairs officer, and (4) manager of food services.

The function of the housing committee should be to interpret existing policies, and to make recommendations for policy changes to the president or to the college or university policy council.

The committee should establish a meeting schedule at its discretion.

Manager of Residence Services

The manager of residence services is directly responsible to the business officer and to the student affairs officer. Under this direction he should assume the responsibility for:

1. Working cooperatively with college personnel for the promotion of student health, welfare and scholastic attainment.
2. Supervising all operational and maintenance activities within the residence halls except those specifically assigned to the manager of food services.
3. Receiving applications for employment for regular personnel and making recommendations for employment to the business officer or student affairs officer, dependent upon the nature of the personnel being employed. (For the employment of head residents and graduate assistants, recommendations should be made jointly to the two officers.)
4. Conducting an inservice training program for all employees under his supervision.
5. Furnishing direction and coordination of work loads and work areas and implementing this direction through the head residents of the halls.
6. Requisitioning building and operational supplies and equipment and preparing work orders.
7. Receiving incoming merchandise and transmitting approved invoices to the business officer for checking and payment.
8. Preparing and approving payrolls and forwarding them to the business officer for checking and payment.
9. Preparing an annual report, including recommenda-

tions, at the end of each year and assisting in the preparation of a budget for the following year. This annual report should consist of two parts: (1) the physical operation of all halls, and (2) their educational aspect. Make one annual report. Copies of the two-part report should be furnished to the business officer and the student affairs officer.

10. Serving as the chairman of the housing committee.

Manager of Food Services

The manager of food services is directly responsible to the business officer. Under this direction he should assume responsibility for:

1. Working cooperatively with college personnel to

How to organize a residence hall

LEWIS E. PROFIT

Director of Self-Liquidating Projects
Eastern Michigan College, Ypsilanti

promote student welfare and scholastic attainment.

2. Supervising all operational and maintenance activities within the food service program.

3. Receiving applications for employment for regular personnel and recommending employment to the business officer.

4. Providing standards for work loads and work areas and giving general supervision to the work performed.

5. Providing procedures for the employment and supervision of student labor.

6. Conducting an inservice training program for all employees.

7. Directing the purchase of foods and kitchen and dining room supplies.

8. Requisitioning building and operational supplies and equipment and preparing work orders.

9. Establishing procedures for receiving incoming merchandise and transmitting approved invoices to the business officer for checking and payment.

10. Supervising preparation of all menus.
11. Preparing and approving payrolls and forwarding them to the business officer for checking and payment.
12. Coordinating food service policies and procedures with college and public health agencies.
13. Supervising the dining hall.
14. Preparing an annual report, including recommendations, at the end of each year and assisting in preparing a budget for the subsequent year.

Head Resident

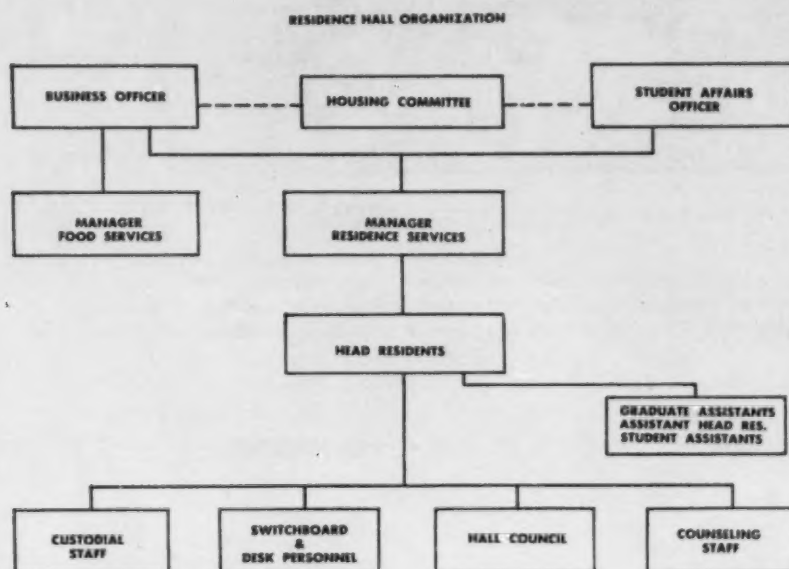
1. The head resident should be considered the executive head of the residence hall. He should be responsible to the manager of the residence services.

5. The head resident should have the privilege and duty of maintaining direct liaison with the student affairs officer for all matters pertaining to the program within the halls.

6. He should be responsible for informing the manager of residence services of the general nature of this direct liaison with other appropriate offices such as the dean of men, dean of women, or health service, but at no time should this need for communication inhibit direct relationship with these other offices.

Graduate or Student Assistant

1. The assistants should be responsible to the head resident in each hall. Their responsibilities should be es-



STAFF RESPONSIBILITIES

JOINT RESPONSIBILITIES

Selection of head resident
Selection of graduate and student assistants
Supervision of desk personnel

STUDENT AFFAIRS OFFICER

Recreational program
Social program
Hall council and government
General counseling program
Assignment to halls
Assignment to rooms
Adjustment problems resulting from inappropriate assignments
Interhall councils
All areas of educational programming

BUSINESS OFFICER

General financial program
General maintenance program
Selection of custodial staff
Cleanliness of the halls
Inventory programs
Requisition and work orders
Payroll procedures

2. It should be his responsibility to direct and supervise all phases of the residence hall operation, except for food services. This includes supervision of janitors and maids, telephone switchboard operators, receptionist and desk personnel, the clerical staff, the counselors, graduate assistants, student assistants, and whatever other personnel is placed in the hall.

3. The head resident should implement, direct and supervise the educational program within the hall. For purposes of definition, educational operations cover all forms of counseling, guidance, residence hall government, and recreational and social activities, including the dining room.

4. He should maintain the necessary lines of communication to the manager of residence services and to the appropriate auxiliary services within and outside the college for efficient operation of the hall. These contacts include, but are not necessarily limited to, health service, civil defense, and police.

tablished by the head resident, who will follow through.

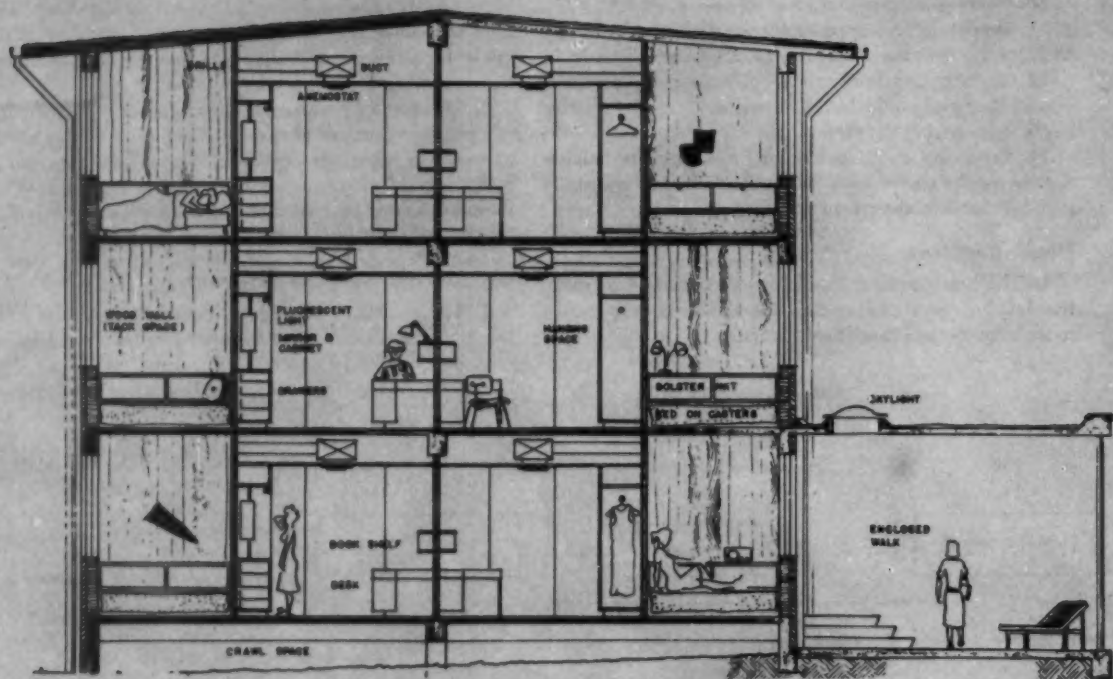
2. An assistant should serve in the capacity of head resident in the absence of the head resident.

3. The assistants should keep clear the lines of communication to the head resident so that a unified policy and program exists within the hall under the head resident's direction.

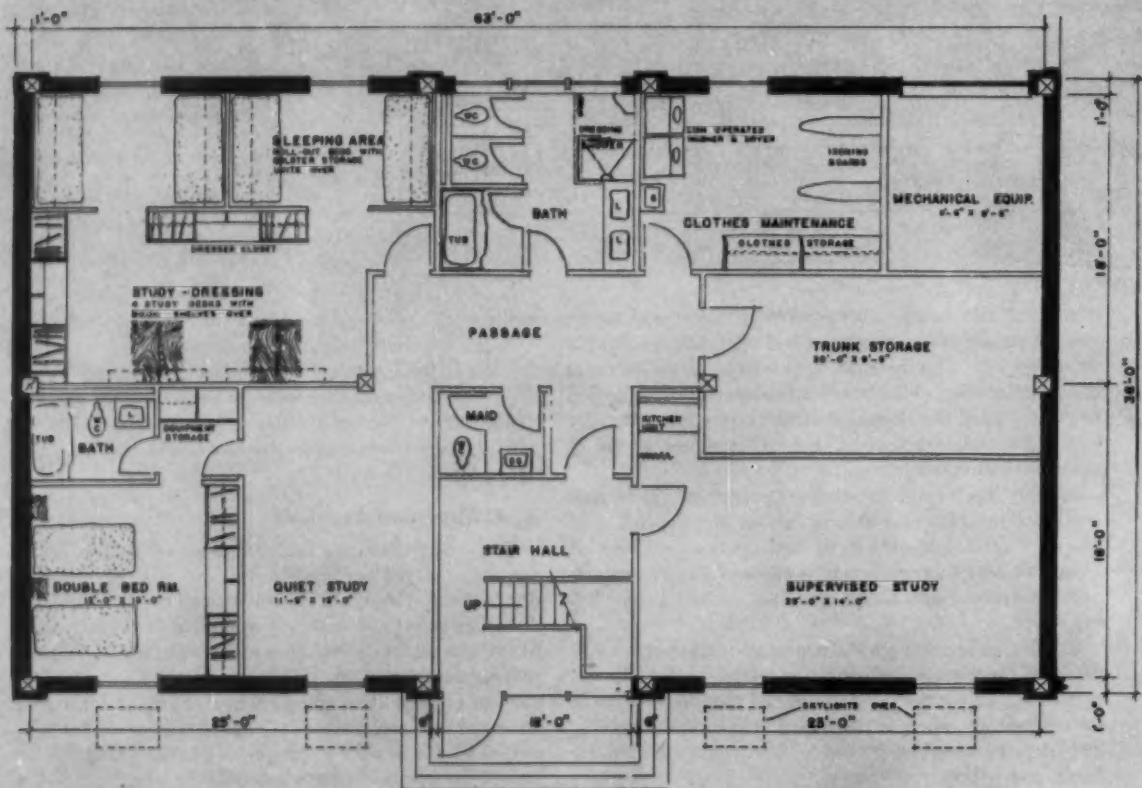
Assistant Head Resident

In the event assistant head residents are used in lieu of graduate or student assistants, they will perform the duties of the graduate or student assistants.

Future growth of college enrollments is assured owing to the tremendous population increases. This growth will present many problems to all colleges and more specifically to the residence college where the need for a good residence hall organization is vital to the successful completion of the academic program. I believe that the organization shown has many merits. ■



Above: Cross-section of proposed residence hall with suite plan, showing series of sleeping cubicles around periphery of building, with dressing-study area inside. Below: Typical ground floor plan of proposed dormitory.



MANY original solutions to residence hall and other building problems lie in the dead files of architects. One such is a basic dormitory plan we developed for presentation to one of our university clients. It was a rather radical suite plan and was based on considerable research on the student's living pattern.

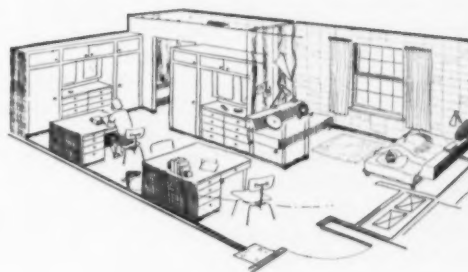
We assumed in our planning that recreation is best provided for as a group activity. There then remained the bedroom, or a place for sleeping, toilet, and study. We organized these areas on the time element as follows:

Function	Time	Disturbance Factor
Sleeping	Night	Undisturbed
Toilet	Morning, night	None
Study	Evening	Moderate

Over the space allocations for these three functions, we superimposed the pattern of traffic. It is desirable that the area provided for sleeping be the terminus of the traffic pattern, *i.e.* farthest from the door. The sleeping

R. W. NAEF

Architect & Engineer
Jackson, Miss.



This suite plan shows originality

area so located and arranged for sitting as well as sleeping can double as a study retreat when the student finds it desirable to study without interruption. This means that good artificial illumination is required at this point.

While each student might prefer complete bathing and dressing facilities within his room, these are too expensive, even if otherwise desirable. So the student's room must provide for the requirements of dressing and major clothing storage, but bathing facilities must be centralized.

While many formulas exist for establishing the number of students per bathroom fixture, the results vary widely. However, the larger the number of students per toilet-shower, the more efficient the use factor. In men's dormitories it is necessary to place a mirror over the lavatory for shaving. In women's residence halls, a certain number of lavatories have to be equipped with hair traps for shampooing. In some areas, it is the policy to place one bathtub in each women's toilet-shower room. This tub can be equipped with a shower to take care of rush periods.

Long corridors usually add approximately 22 per cent to the gross area of a residence hall. To eliminate these would not only reduce the gross area but would eliminate the tunnel-like atmosphere of those long straight corridors.

The idea of community living is hardly practical in the average dormitory accommodating from 200 to 300 students. If the building can be broken down into groups of 50 or less, it becomes an effective entity. In a large dormitory with its central corridor it is difficult to define groups either horizontally or vertically. To us the obvious answer was to build accommodations that would take care of all residence hall functions except large social gatherings, mail, packages, laundry and management. These last named functions would be combined in a one-story central unit planned for expansion.

From the foregoing conclusions based on personal research, we developed the following plan. In it we solved



Top of page: Perspective of typical study-bedroom combination.

Above: Women's residence hall.

A cross section of this perspective is shown at top of the opposite page.

the problem of sleeping arrangements by designing a series of sleeping cubicles around the periphery of the building. With a bolster unit over each bed, which is on casters, the bed becomes a couch for daytime use. The bolster unit can be used for storage of spare bed clothes and its top as a shelf for light, books and radio.

Being on the periphery of the building, these cubicles are the terminus of the traffic pattern and subject to the least disturbance. The partitions around the bed are soft pine paneling finished with a neutral stain. Thus the entire area of the wall can be used as a tackboard, for thumb-tack holes are lost in the grain and texture of the wood.

The dressing area serves as a screen between the beds and the study area. The wardrobe dresser unit was designed to fit the average student's possessions. We found that, instead of the usual mirror and cosmetic shelves, a standard institutional mirror front medicine cabinet would do the job better and would cost less. Location of the wardrobes permits the student to dress either in the study area or in the bed cubicle.

Three Possible Arrangements for Study Unit

The study unit is shown in three possible arrangements. We would prefer the study desk to be movable, so that students could arrive at their own arrangement. However, sometimes the equipment requirements preclude movable desks. In this case, the location would be made by a study of student study habits. Over each study desk are the usual bookshelves and reading light.

The typical floor is divided into four suites each accommodating four students, or a total of 16 students per floor. These four suites are served by a common toilet-shower room having three water closets, two showers, a shower-tub combination, and four lavatories. Two of the lavatories are located in the toilet-shower room proper and the other two in the passage. The lavatories in the passage are provided to reduce traffic in the toilet-shower room. One has a drinking fountain bubbler.

The two upper floors of the unit are identical, and the first floor is altered to accommodate the common facilities. The room labeled "supervised study" is also a recreation room. In this particular plan we provided a small room for quiet study and a two-bedroom suite with private bath for a unit manager or graduate student supervisor. This was the first consideration; we later decided to eliminate the two-bedroom and quiet study in favor of a four-bedroom student suite.

The trunk storage room would be fitted to accommodate hanging space for seldom used wearing apparel, like party gowns and fur coats, and bins for suitcases. The clothes maintenance room with coin-operated washer and drier would also have room for some clothes storage, ironing boards, and small laundry sink.

In recent years the development of highly efficient small heating and cooling units has led to the distribution of fuel in the form of natural gas or electricity. These package units make possible the use of a very small utility room with a removable louvered wall for service. When a number of identical units are in use, an institution could stock a complete utility room. In the event of breakdown it would be possible to pull out the broken unit, replace it with a spare, and have the repairs to the unit done in a shop at leisure.

The building was designed for a single two-zone air handling unit distributing vertically adjacent to each room door with a return air duct adjacent in each chase. The unit would have a hot water coil supplied by a small package boiler. In the summer the fan could be operated without heat, thus providing forced air ventilation. If funds are available, a chilled water coil could be added with a compressor and heat exchanger, thus providing year-round air conditioning.

The toilet-shower facility is reduced on the first floor in proportion to the number of students housed. Part of the stair hall is taken up with a maid's closet and toilet.

It is proposed that this type of unit be built as either an isolated unit or attached in groups of four to six. The units would be connected by a covered passageway to a one-story unit housing a central lounge, public toilet rooms, kitchen, matron's quarters, package and mail delivery. In the sketch of the women's dormitory shown on page 37, the covered connecting passage is enclosed with an ornamental metal grille to enforce traffic lines through the control center.

The following calculations are based on the elimination of the two-bedroom unit on the ground floor plan shown on page 36 and the substitution of a four-bedroom suite. The accommodations per unit would be:

First floor	8 students
Second floor	16 students
Third floor	16 students

This would make a total of 40 students per unit, or 160 students in four attached units. Then, with a one-story unit revised to accommodate a matron, public toilets, and a mail and package department, the breakdown would be as follows:

Space Allocation	Sq. Ft. Area	Per Cent of Total	Sq. Ft. per Occupant
Study-bedroom	17,360	51.5	108.5
Supervised study-lounge	2,500	7.4	15.6
Toilet-shower	2,160	6.4	13.5
Service-laundry	1,064	3.2	6.7
Storage	864	2.5	5.4
Corridors, stairs	3,504	10.3	21.9
Other	6,378	18.7	39.7
TOTAL	33,830	100.0	211.3
(34,000 sq. ft. has been used for cost calculations)			

Cost Calculations for Proposed Residence Hall for 160 Students in Suites Accommodating Four

Total square feet	34,000
Total cubic feet	365,000
Number of students	160
Cost of building only	\$299,200
Cost of building and fixed equipment	\$350,200
All construction cost	\$370,600
Total project cost	\$408,000

The costs per square foot for the building only would be \$8.80; for building and fixed equipment, \$10.30; for all construction, \$10.90, and for the project, \$12. The per cubic foot costs would be, respectively, 81 cents, 95 cents, \$1 and \$1.10.

The per student costs would be, respectively, \$1870, \$2189, \$2316 and \$2550. It would cost an additional \$26,000 to provide air conditioning equipment for summer cooling. This would increase the per student cost to \$2712.



College housing in the Deep South

I. WILLIAM RICCIUTI, Partner, Ricciuti Associates, Architects-Engineers, New Orleans

COLLEGE and university administrators today want their housing units to be practical, flexible, livable, with a good measure of beauty, and, above all, economical. So do practical practicing architects.

These foregoing are the key features of twin residence halls at Southwestern Louisiana Institute, Lafayette. After one year of housing 376 male students, both the occupants and the administration agree that these features have proved to be wise choices.

Yet, college housing in the Deep South must have more than these. The buildings must be adapted to the region and must be constructed in sympathy with the weather — not against it or in spite of it.

The S.L.I. residence halls are a good example of this regional thinking. In general, they are done in contemporary Louisiana style. As is always the case in the state's hot and humid climate, control of the sun was of prime importance in the over-all design. This was done by using exterior corridors, or "verandas," a term correctly used in Southern building design for several centuries.

These verandas serve a number of purposes: (1) compel an inherent feeling of indigenous Louisiana architecture; (2) protect open windows from sudden rainstorms, which are notorious in this area; (3) help keep the cost of the project within the limit of an extremely restricted budget, and (4) combat the sun problem as much as possible.

In regard to the last point, the living units of the twin dormitories receive no summer sun from 8 a.m. until 6

p.m. This feature has received a vote of thanks from the students during the late spring days of cramming for exams and from the summer school students. The winter sun is excluded for two hours only from 11 a.m. until 1 p.m. Both desirable conditions were obtained through careful sun altitude and orientation studies, which suggested the use of 6 foot overhangs on the verandas.

Exterior stairs, made of reinforced concrete with protective metal railings, connect the three levels of the residence buildings. They are backed by a sun screen of cast stone extending from grade level to the underside of the roof slab. Shielding these exterior stairs creates a focal point of interest for each of the buildings.

All exterior walls, with the exception of the end walls, are prefabricated window-wall units with insulated panel inserts of porcelain enameled steel below window sill height. The end walls are solid brick curtain walls, 8 inches thick.

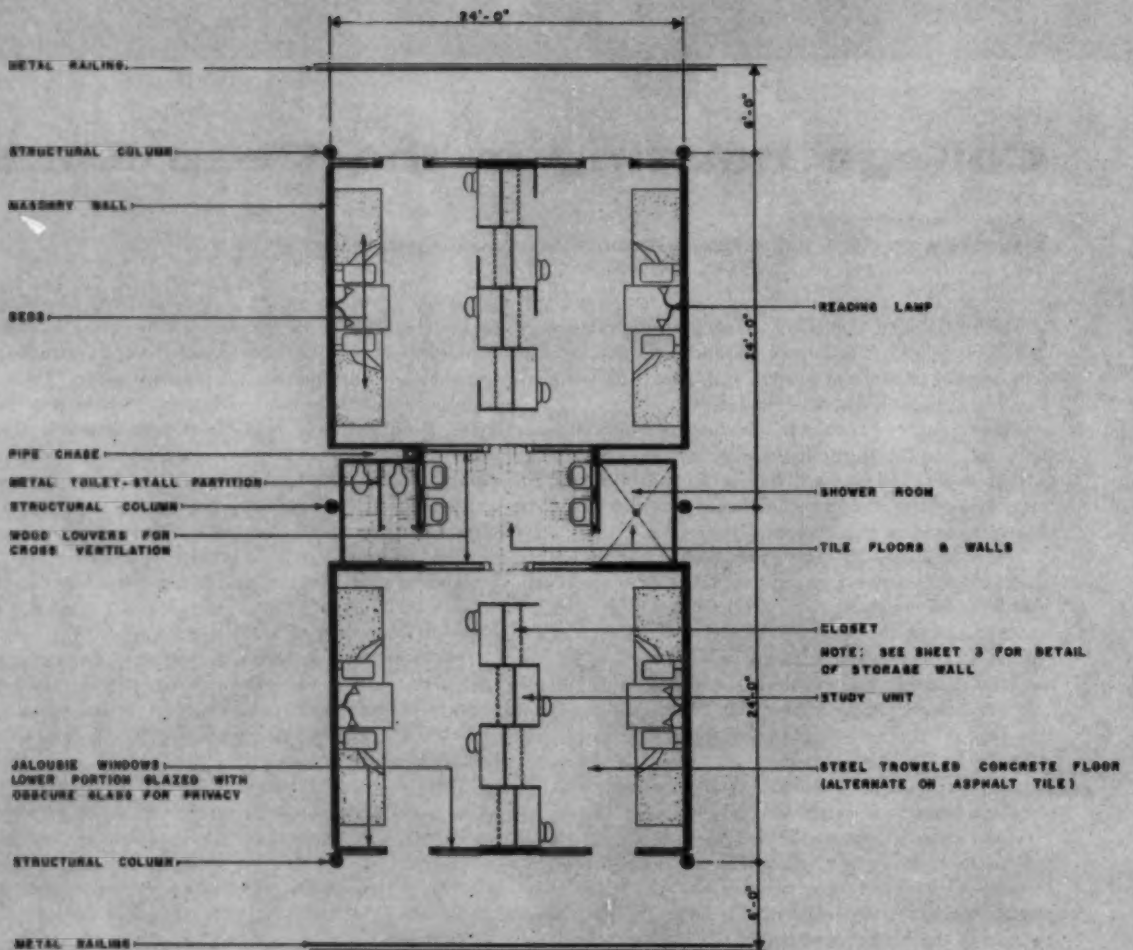
The porcelainized panels of the exterior walls form an ideal building medium. They are very light, waterproof, frostproof, resistant to impact, noncombustible and highly maintenance-free and have sufficient thermal insulating quality to provide the protection very much needed.

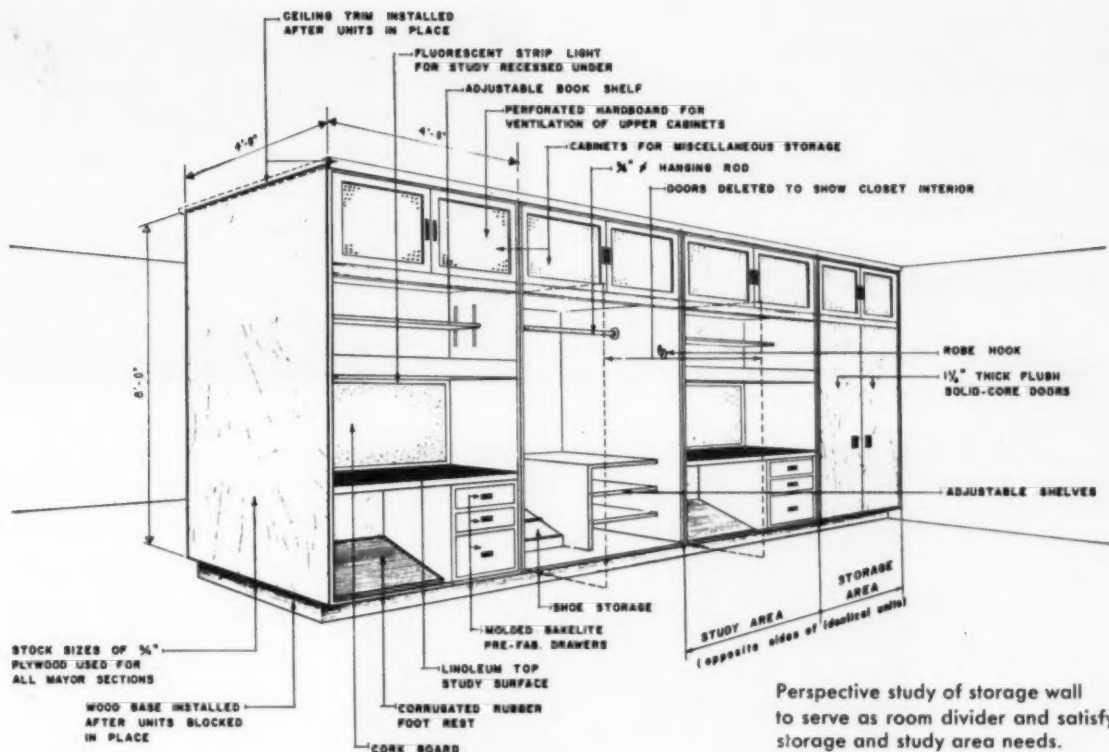
Aluminum windows of the jalousie type are used on all exterior walls.

Complementing all of these desirable factors is the fact that an infinite variety of colors can be exploited and this adds to the beauty of the buildings.

(Text Continued on Page 41)

Below: Plan of typical eight-student unit in twin residence halls for men at Southwestern Louisiana Institute. On page 31 is a full-page picture of the buildings showing the verandas.





Perhaps the most interesting features of the twin residence halls are the storage walls. They are prefabricated, chiefly of 3/4 inch hardwood plywood. Such a unit doubles as a storage place and workshop and serves as a room divider as well. Thus, it eliminates many conventional and costly interior partitions.

Economy has been realized through the multiplicity of identical units, which allow for factory mass production. The completed product is delivered to the site and simply anchored into place. The expense of on-the-job labor is virtually eliminated.

Each storage wall has two desks with corrugated foot rests. There is fluorescent lighting above. Ample hanging space is provided for clothes and there are drawers, overhead cabinets, shoe racks, adjustable shelves, and a cork-board for memorandums. The unit lends itself to neatness and gives the student a little private community all to himself.

All living units have glass-jalousied doors.

Flexibility is the keynote in the design for every living unit. Each bay can be repeated both horizontally and vertically, depending upon the required size of the project. The twin residence halls are designed for eight students to each living area, totaling 376 students.

It is well to note that the verandas on both sides of the buildings are accessible from each of the living units. This makes highly negligible the danger of being trapped by fire.

Living area floors are of asphalt tile, and all toilet and shower rooms have ceramic tile floors. Economy of plumb-

ing is brought about by concentrating the toilet areas into one core, each toilet room being mechanically ventilated through this single core. The result is a minimum of piping and roof penetration.

Interior partitions are of smooth-faced unglazed structural tile in a pleasing buff color. Ceilings are of concrete with contrasting paint finish.

Other features include: (1) incandescent fixtures for the artificial lighting; (2) a low-pressure steam convector system for heating; (3) natural ventilation, except in the toilet areas, and (4) an intercommunication system in each building.

Both buildings are concrete and masonry throughout, making them fireproof. Lightweight aggregate structural concrete is utilized, except for footing. Roof and floor slabs are "flat-slab" designed. Columns are steel supported on spread-footing foundations. Roof slabs are reinforced structural concrete, insulated with 2 inch thick lightweight concrete fill and covered with four-ply built-up roofing and gravel.

From a visual point of view, the residence halls are the two vertical members of the letter "H." They are to be joined by a one-story building containing apartments for two housemothers, lounge, television room, study section, snack bar, and patio.

For the statistical reader, here are the pertinent figures: rooms, 118; capacity, 376 students; total costs, \$1,020,000. Cost per student, \$2702; cost per room, \$5425; cost per square foot, \$13.86. Net area, 73,604 square feet; area per student, 196 square feet.

Right: Residence hall for 120 students at Moore Institute of Art. COVER picture shows main reception lounge.



Left: Penthouse painting terrace opens onto balcony which overlooks Philadelphia skyline.

Below: Typical student room. It is one of two double bedrooms, separated by a bath and foyer, which make up a suite.



Girls' quarters rise in urban setting

A SIX-STORY elevator structure, with a penthouse painting terrace affording a magnificent view of the Philadelphia skyline, accommodates 120 students at Moore Institute of Art. Designed by Harbeson, Hough, Livingston and Larson, it is one of four new buildings on a new campus.

Moore Institute of Art, the oldest art college in the country and with an enrollment capacity of 350 women, is supported both by the state of Pennsylvania and by private endowments. Money for new buildings on a new campus was bequeathed by the late Joseph Moore Jr. 25 years ago and was held in escrow until it reached an amount adequate for the reconstruction project.

Rising costs made it necessary to supplement the campus building fund with a federal housing loan of \$800,000 on the residence hall. Excluding property, fees and furnishings the dormitory cost \$866,800; this was a unit cost of \$18.73 a square foot or \$2.01 a cubic foot, based on the then current enrollment figures. The over-all cost of the building was \$1,125,000. It opened in September 1957.

Designed to be a finished material throughout, the structure is made up of exposed concrete columns and ceilings, brick partitions, exposed steel frames in some areas and exposed concrete block and plank in others. Where necessary, the interiors were smoothed and painted but not otherwise covered, a feature that contributes to the functionally modern look of the building as well as to economy of construction.

On the first floor, the building has public rooms and apartments for the resident personnel. Above are four floors of bedroom-studios and the penthouse painting terrace. The exterior of the building is face brick, with exterior metal trim of aluminum and wood trim of natural finish cypress.

Faculty and student dining rooms and the kitchen and service area are in a separate but connected building.

The four structures composing the new Moore Institute border a landscaped garden or quadrangle. One glass wall of the cafeteria building and one glazed wall of the main lounge of the residence hall look out on the garden.

The main lounge or reception room is air conditioned, but the dining room with its abundance of windows is not. The latter is heated and ventilated by a 15 ton unit that serves the lounge and recreation room for both heating and cooling by forced air through floor grilles and straight-line ceiling diffusers. Supplementary 2 ton cooling

units have been installed in each of the main floor apartments for the director, assistant director, dietitian and building superintendent, bringing the total air conditioning load to 25 tons. The rest of the building is heated by city steam, converted to hot water for convectors.

On the four residential floors, the students live in suites consisting of two double bedrooms, bath and foyer. There are 60 bedrooms, or 30 suites. One wall of each room is of face brick; one is covered with corkboard on which students may hang their art work; the outside wall is made up of projected, aluminum trimmed windows, and the fourth wall is taken up with built-in birch natural finish furniture, consisting of wardrobes and double dressers, two convertible desk drawer tables, and bookshelves.

The rooms are furnished with movable studio couches, chairs and wastebaskets. Students supply bed coverings, curtains and linens only. Between the two bedrooms is a large foyer, partly utilized as closet space, where there is a telephone leading to the central station in the elevator lobby.

Off the foyer is a four-person bathroom with vinyl tile floors in blue or yellow to match the door to the suite. Walls are of gray ceramic tile, and all fixtures and shower curtains are white.

Corridors on each floor are covered with asphalt tile; they open at either end onto a small balcony that overlooks the city. The exciting glass enclosed painting terrace on the roof is furnished with easels, large drawing tables, sewing machines, and cutting tables (for fashion design students). A bathroom and sink have been installed in the penthouse.

Students of Moore Institute's interior design department were responsible for the decor of the residence hall. For more than a year they worked on it as a class project under Edward A. Walton, department head. Using scale models and fabric samples, the students had an opportunity to use professionally the training they had received. The results of their planning are practical but exciting.

Public rooms are done in warm, bright colors with an abundance of comfortable chairs and couches and a handsome array of indoor plants in white ceramic bowls. The general color scheme in the large recreation room and the reception lounge is chartreuse, burnt orange, white and turquoise, while the upper floors are done in alternating bright blue and yellow.

The residence hall is entirely fireproof with concrete stairways in fire towers from penthouse to basement. ■



This low-cost hall



Student rooms in Lincoln College's new residence hall for men are equipped with built-in furniture, terrazzo floors, and aluminum windows.

LINCOLN COLLEGE, a two-year coeducational institution located in the rich farming area of central Illinois, was chartered in 1865 and named after Abraham Lincoln during his lifetime. It was first sponsored by a Protestant religious group but is now a privately endowed nonsectarian institution. Lincoln serves a growing demand for individualized instruction, but, lacking active alumni groups — its graduates frequently go on to major universities, carrying their loyalties with them — the institution draws support chiefly from those interested in Lincolniana and in good education.

Faced with an obvious need for additional residence hall space, the board applied for help to the Housing and Home Finance Agency and undertook a fund raising drive. Aid eventually came from both sources.

The new residence hall for men is of wall bearing masonry construction. Exposed and painted lightweight concrete block was used for walls and partitions for bearing as well as space definitions. The exterior is red brick selected to match that of the original 100 year old main building, which still gives the campus an air of venerable charm.

The floor and roof construction employs a relatively new structural product. Made of edge-ground, lightweight concrete units, the long steel reinforced concrete plank units are made in the factory and set in place by crane; they fit together with tongue and groove joints. Finish flooring is terrazzo. The underside is exposed and spray-painted, as are the lightweight concrete block walls; these create harmonious and durable interiors with excellent acoustical properties. There is no objectionable sound



CARTER E. HEWITT

Hewitt & Bastian,
Architects, Peoria, Ill.

Left: A view of the terrace adjacent to the lounge. The illustration on the opposite page shows Lebold Lounge with its furniture of distinctive contemporary design.

built for rural college men

transfer between rooms, and plenty of sound absorption, making a quiet atmosphere conducive to concentrated study.

This simple construction produced an economical building with contract costs of less than \$2500 for each of its 78 occupants, including (free) a lounge, a basement recreation room, an apartment for a supervisor, and built-in room furniture. It was not necessary to indulge in petty economies, always out of place in institutional buildings. The aluminum windows are of the best heavy-section construction. Interior doors are plastic surfaced for maximum durability and are of solid-core construction. The roof and flashings are bonded for 20 years. The building is completely fire-resistant.

Bedroom furnishings were originally designed by the architects to be built in so as to meet Housing and Home Finance Agency requirements for inclusion under the loan. The board later elected to omit these items from the general contract, under the impression that it could obtain furniture of better quality for a similar amount from a furniture manufacturer, and that the cost could still be met with loan funds, because the furniture would be attached to the building. Housing and Home Finance Agency ruled, however, that in the absence of formal competitive bidding, payment from loan funds would be authorized only if the transaction were treated as a change-order handled through the general contractor, who would also have responsibility for installing the furniture.

Installation charges under this procedure added about \$4000 to the cost of the furniture as originally designed and bid, but the board was able to select exactly what was

wanted and is well pleased with the results. Furnishings were paid for out of loan funds.

Lounge furniture was purchased from a special gift and is of distinctive contemporary design.

Installation of electrical work in concrete block walls is quite difficult, particularly when the exact location of outlets is critical, and some difficulty of this kind was experienced. We believe that plaster partitions are better in structures in which the partitions are not used for bearing. In this building, however, we could not sacrifice the economies inherent in the dual use of the partitions (*i.e.* for structural support and space division), and we found the electrical difficulties more of an annoyance than a serious problem.

Encouraging to Other Small Colleges

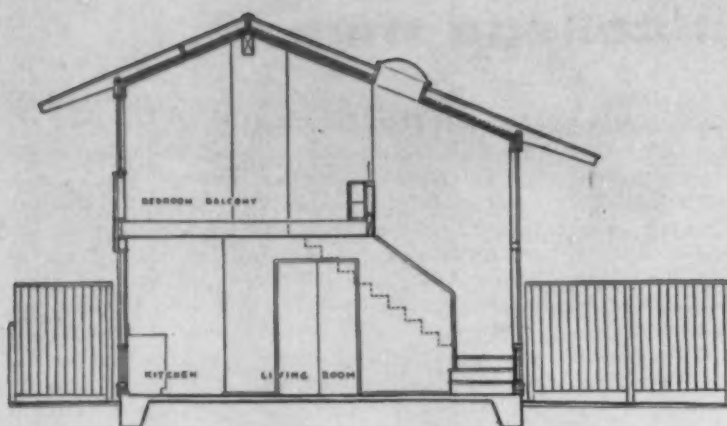
President Raymond Dooley believes that perhaps the greatest significance in this building lies in the encouragement it should offer to other small colleges. He emphasizes that institutions desiring Housing and Home Finance Agency loans must be able to demonstrate that existing housing is inadequate for students already enrolled. Lincoln has seen many years when the enrollment was less than 150. So he feels that if a college the size of Lincoln can do it, others can, too. In fact, right now, with a fall enrollment of 275, Lincoln is planning and working for more self-liquidating dormitory space in the near future to accommodate the ever increasing flow of students desiring its special educational program.

Olin-Sang Hall, the new dormitory, may be one factor that is bringing these students to Lincoln. ■

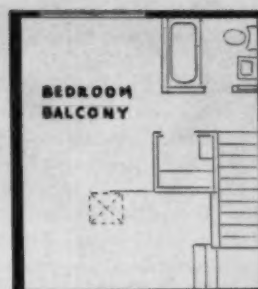


STANFORD UNIVERSITY MARRIED STUDENT HOUSING

How a western university



Top of Page: Sketch of the new one-story and two-story apartments, showing parking area in foreground. Above: Transverse section of a balcony apartment in Type "B" building, and, at right, the floor plans.



UPPER FLOOR PLAN



GROUND FLOOR PLAN
TYPE 'B' BUILDING



Mr. and Mrs. William Clement and their son, Roger, occupy an apartment in Stanford Village. Second child is a visitor.

is providing for its married students

WILLIAMS & BURROWS, Inc., General Contractors, Belmont, Calif.

STANFORD UNIVERSITY is tackling the problem of housing married students with a building project consisting of 250 units, now under construction. In drawing up the plans, Wurster, Bernardi and Emmons of San Francisco, the architects, made informality and economy the main considerations.

Approximately one-fifth of Stanford's enrollment consists of married students. The 300 rental apartments in the present Stanford Village, a remodeled hospital building, does not begin to house these 1532 students. Moreover, by agreement with the city of Menlo Park, Stanford must vacate that property by 1965.

The first phase of the 250 unit project is being constructed by our firm; it consists of 54 buildings with from four to six apartments per building. All are one-story or two-story wood frame structures incorporating five types of apartments: (1) one-bedroom apartment on one floor; (2) balcony type of one-bedroom, two-story apartment; (3) two-bedroom, one-story apartment; (4) two-bedroom, two-story apartment, and (5) one-story apartment with two or three bedrooms.

The one-bedroom, two-story apartment of the balcony type is unusual. The second floor bedroom is only partially partitioned off in a balcony. A portion of the living room ceiling is then two stories high, and heat can circulate more freely about the entire apartment.

Apartments are arranged within each building to ensure maximum privacy and quiet. All apartments in the two-story units have first-story and second-story rooms so that means that each has a ground floor main entrance. Concrete slab on grade is used as foundation, which

means that the first floor is directly on the ground; this eliminates entrance steps, which is safer for children and more economical. Radiant heating coils are installed in the floor.

The buildings have wood shingle roofs and asbestos cement panels. Concrete blocks are used on the ends of some buildings. Interior walls are gypsum board with paper facing, which will be painted by the university. Counter tops in the kitchen are durable plastic.

Stanford furnishes each apartment. Equipment includes an electric range and an automatic garbage grinder. Soundproofing assures quiet study facilities. The project has a central storage room, but there is ample storage space in each apartment for personal possessions.

The new units are arranged haphazardly for greater informality. The natural landscape of open fields and wooded areas of eucalyptus and oak trees has been preserved. To preserve the beauty of the landscape, all utilities are underground. A meadow provides ample play space for older children and social space for adults.

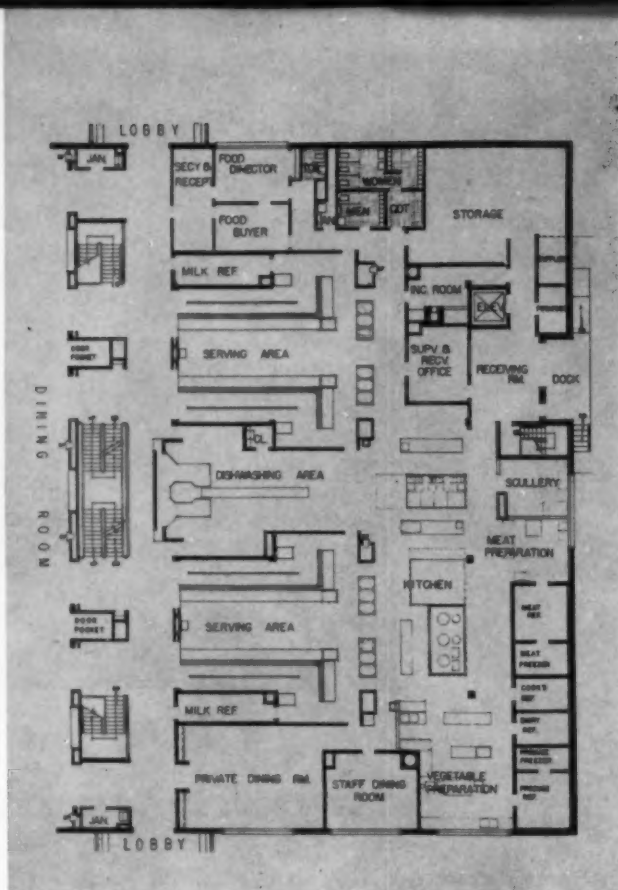
"Greenbelts," 200 feet wide, landscaped with shrubbery and trees, separate the buildings from the two main thoroughfares, keep down traffic noises, and maintain greater safety and cleanliness.

Play space for children is provided. Between two facing buildings a sturdy steel chain link fence encloses the play area so that mothers at their kitchen windows can keep watch over their offspring. Asphalt pads around each building permit children to roller-skate, ride tricycles, and play close to home.

Buildings are within walking distance of classrooms. ■



Above: Infrared lamps over cafeteria counter shelf. These lights are also practical in keeping food hot in steam tables. (When used in this manner, lights, of course, must be turned off before serving begins.)



Second Floor Plan



Left: Self-service coffee dispenser in Williston Hall. Note open plan in kitchen, giving cooks and students full view of one another.

Right: View of the new west dormitory and central recreation dining unit in the women's residence hall group at Northern Illinois University. Neptune Hall (in background) is connected to the central unit by a tunnel.



Advance planning for food service

THE growth of Northern Illinois University at DeKalb has been phenomenal. It had 2000 students in 1952, 5600 in 1958, and is expected to have 10,000 in 1965. Rapid expansion of our residence hall facilities was essential.

President Leslie A. Holmes, his planning committee of university officials, and the architects for the project, Schaeffer, Wilson and Evans of Bloomington, Ill., gave first consideration to analyzing our present dormitories in view of making possible improvements in designing the new. They reached these conclusions:

1. Avoid long and relatively dark corridors.
2. Increase student room sizes (from 11 by 15 feet to 12 by 15 feet).
3. Provide more recreation and lounge facilities.
4. Provide better dining facilities (a maximum of 400 students per line).
5. Increase efficiency by raising the number of students per residence hall kitchen from 500 to 1200 or 1500.

The area designated for the project was back of our newest dormitory, Neptune Hall, and is bounded by a creek that runs in an S curve behind this building. University planners wanted two dormitory wings of about 200 rooms each, connected by a dining and recreation unit. This led the architects to propose the present design which, although following the natural contours of the creek, does create a kind of quadrangle effect when viewed in connection with Neptune Hall.

Possible Payroll Savings of \$200,000

A study showed that by closing the food service in Neptune Hall and feeding its residents in the new building, payroll savings exceeding \$200,000 would be achieved. Accordingly it was decided to convert the present Neptune Hall kitchen into a central bakeshop and to construct a tunnel between Neptune Hall and the new dining rooms for student use in inclement weather.

Another consideration in the planning was the general feeling that the buildings should permit a natural grouping of students in ideal group sizes, which was considered to be from 50 to 60 students.

To accomplish this natural grouping of students into these sizes, the architects proposed the use of a core plan, which places all bathrooms, toilets, showers, stairways, ironing rooms, and utilities in the center of the building, with small corridors on each side providing access to the student rooms. This type of plan makes the building shorter and wider and reduces noise, since the central core and two corridors provide a buffer between the two rows

of student rooms. The extra cost of corridor space is made up by savings through lesser exterior wall construction.

Once these major factors had been considered, the planning committee proceeded to outline additional requirements for the new project. These have taken shape in the new building which will be ready for occupancy in September.

1. One of the two new dormitories is to be used as a men's hall for several years until a new residence quadrangle for men is constructed.
2. Each dormitory contains a formal lounge, reception desk, mail room, two directors' apartments, a guest room, ironing rooms, trunk storage rooms, and public telephone booths.
3. The dining room accommodates a thousand students at one sitting (for Sunday dinner table service) and is divisible into three separate rooms by means of folding doors. Additional folding doors provide smaller rooms for "corridor dinners."
4. A private dining room accommodates 50 persons, and will be used for special banquets and staff luncheons.
5. All kitchen and dining room areas are on the same floor, to facilitate deliveries and traffic flow.
6. Dishwashing facilities are located in one central dishroom, adjacent to the dining room.
7. The central recreation room is large enough for all-dorm dances, flanked by smaller rooms for specialized and multipurpose activities.
8. The snack bar is adjacent to the recreation room and is equipped for serving light snacks and evening refreshments and also for use for banquets seating 140 persons. Space has been allowed for vending machines to be used when the snack bar is closed.
9. Mechanical laundry facilities are located in the central unit; there, too, is a room for central laundry and dry-cleaning pickup service.
10. Noise is reduced through relatively soundproof construction of walls and by means of other features.
11. An "overassignment" room will accommodate approximately 30, with adjacent washroom and shower facilities. This will be used for students temporarily over-assigned at the beginning of each semester and will be converted to other uses during the remainder of the semester.
12. A large walk-in storage freezer can accommodate several truckloads of frozen food — to be used for all of the university food services.
13. Air conditioning is provided in dining and recreational rooms. This will be especially desirable for summer workshops and conferences.

(Cont. on p. 50)

14. Sunbathing facilities (for women residents) and car washing facilities are available.

Food Service Facilities

In planning the food service facilities, the university asked the architects to engage Henry Espersen, a food service consultant in Chicago, and he, together with S. Alan Baird of Peoria, designed the basic kitchen layout. It was fortunate that this was done *very early* in the planning stage, before the basic framing of the central unit had been worked out. As a result, we have a very large kitchen area in which only two columns are exposed; all other framing has been designed into kitchen layout.

The first two items to be considered by the kitchen planners were the dishroom and the serving lines. In order to avoid the expense of a conveyor system, the dirty dish windows have been placed in a central location in the corridor that separates the kitchen from the dining rooms. The dishroom was then to be flanked by two serving lines on each side. This, however, could have created a serious problem of cross-traffic. To minimize this problem, we decided to channel the traffic to each line through four separate stairways leading down from the recreation room above. This system enables students to relax in the lounge rather than stand in a waiting line.

The following additional features are incorporated into the food service area:

1. A bi-level receiving dock, connected by a ramp, permits unloading from small pickup and panel trucks as well as from large semitrailers.

2. The supervisor's office is located strategically between receiving and production areas, with windows on three sides.

3. A can crushing machine is provided, as well as a soiled linen chute and a chute for empty cardboard boxes to be burned in the incinerator on the floor below.

4. There is only one electric range, with most of the cooking to be done in steam jacketed kettles, steamers, electric fryers and griddles, and a rotating gas oven, 11 feet 10 inches wide with 24 pan capacity.

5. Equipment and columns are so planned as to permit an unobstructed view throughout the major part of the kitchen area.

6. Much of the production is planned around standard

18 by 26 inch bakers trays. A pot and pan washer will wash these trays mechanically.

7. A potato peeler of 70 pound capacity is equipped with a garbage disposal unit. This feeds into a specially built potato paring station with a tapered chute feeding the potatoes directly into portable sinks.

8. Walk-in refrigerators have inside drains and large 5 inch thermometers on the outside. The stainless steel freezer doors have heating cables for easy operation.

9. Each cafeteria service line is backed up with a three-section hot and cold pass-through designed so that carts 70 inches high can be rolled into it. Two of the sections are for refrigerated food; the other is for hot foods or nonrefrigerated items.

10. Although the cafeteria counters are set on tiled curbs, a cutout has been made in each line to accommodate a portable 24 by 36 inch electric griddle. The griddles will be rolled into the line to prepare eggs and pancakes for breakfast and will be rolled back into the range section to fry heavier items such as hamburgers, chops and steaks for lunch and dinners.

11. Infrared lights will keep the food hot when it is being served. Heating strips will warm the dishes on the counter shelves. All dishes are automatically dispensed and all silver will be put in sterile sill containers.

12. A soft ice cream machine in snack bar furnishes dessert for residence hall dining rooms.

13. All milk will be dispensed in 5 gallon cans. Two 20 foot walk-in refrigerators will store milk cans. Milk dispensers will be placed in each serving line, and also next to the condiment tables in the dining room.

14. Coffee urns are two-piece batteries, to permit easy deliming of water tanks. All are equipped with faucets on both sides of the urn. A hinged step in the serving counter underneath will facilitate the operation.

15. The dishwashing room has a 24 foot dishwasher and a glass washing machine. A long overhead shelf stores racks for glasses and silver. An exhaust fan directly over the clean dish section as well as a built-in rinse-injector in the dishwashing machine speeds the drying of the dishes.

The dining room and recreation unit has a metal pan acoustical ceiling, which incorporates radiant heating and cooling. Floor surfacing in these areas is asphalt tile, and quarry tile is used throughout the kitchen areas. ■



Under-the-counter ice cream cabinet in the cafeteria facilitates dipping of ice cream by the serving staff.



View from inside of walk-in refrigerator at Northern Illinois University showing pass-through to serving line.



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Are your residence halls fire-safe?

ONCE again panic legislation is pouring forth from law making bodies all over the country. The reason lies in Our Lady of the Angels School fire in Chicago, which occurred Dec. 1, 1958, and more recently the disastrous fire on the Syracuse University campus.

The same rash of new laws took place in 1929 when 125 lives were lost in the Cleveland Clinic fire; the result was extensive legislation on the use and storage of cellulose nitrate. The Iroquois Theater fire in Chicago in 1903 and the Coconut Grove night club fire in Boston in 1942 resulted in laws covering places of public assemblage.

Of all these reams of laws, some were good, some bad, some indifferent. Witness the law passed by one city council as the result of a serious fire that was not put out because the hydrant failed to function. The council passed an ordinance requiring the fire department to test all fire hydrants two days before a fire.

Schools and colleges are not possessed of magical powers so that they may go unscathed by fire. It would be safe to say that 1959 will see almost every school in the country inspected by fire and building officials as the direct result of the loss of the lives of 94 persons in Our Lady of the Angels School. Can it be that the colleges and universities will be next to suffer a holocaust? Let us see what has happened in the past.

Fires in Schools, Colleges, Average 12 Daily

The National Board of Fire Underwriters' records for 1954-57 show an average of 4550 fires a year, or more than 12 a day, in schools and colleges, with resultant property loss of almost \$25 million a year. More important are the lives lost in these fires. In addition to the Chicago fire, the records show that in Stockbridge, Mass., on March 11, 1957, a hundred-room mansion converted to a dormitory caught fire and burned. Loss was four lives and \$1 million.

One of these days, we may read headlines that scream of the loss of 50 or a hundred students in a night fire at a residence hall. Those headlines could be referring to a dormitory on your campus.

Serious fires have taken the lives of students who believed that school authorities were cognizant of, and had taken every precaution to ensure, good fire safety standards. The need for good fire protection is important at all colleges and universities. However, it is imperative that administrators of colleges located in rural areas accept full responsibility, since often the services of a modern fire department are not available for either inspections or fire fighting purposes.

Those entrusted with the residential care of students should assure themselves that the student's home away from home is safe. It is common knowledge how vulnerable a human being is when asleep, so it is incumbent

upon school officials to see that danger does not materialize in their dormitories, existing and future. Let us see how this can be done.

Almost every fire is small at inception. Large fires are the direct result of one or a combination of factors consisting of: (1) delayed discovery, (2) lack of automatic fire protection, (3) combustible construction and contents, and (4) lack of building features designed to limit the fire. Let us examine these factors.

Delayed discovery and lack of automatic fire protection. We shall discuss these items together, because automatic fire protection systems also give early warning. Unless there are persons working in the building around the clock or unless there is watchman service, there should be a fire warning system that detects smoke or fire and sounds an audible warning to awaken occupants, or there should be an automatic sprinkler system that also awakens occupants and, in addition, places water on the fire. In old, substandard buildings, the latter is required. The sprinkler system installed in corridors, shafts and such service areas as storage closets, kitchens and basements will not only limit the size and extent of the fire but also will assure that occupants are awakened and that exit paths will not be denied them.

Another excellent feature of both these systems is that they may be connected to the local fire department alarm board or to a location on campus such as the engineer's office or to the switchboard where persons on duty can retransmit the alarm to the fire department. Such early notification gives firemen a chance to extinguish the fire while it is small and assures the occupants of a better than even chance of escaping from the building safely.

Combustible construction or contents. Until recently many concrete and steel buildings had signs painted on them announcing to the world that they were safe because they were "fireproof." Such buildings were fire resistive, and various elements of these structures were designed to withstand fire from one to four hours without failing. However, combustible contents remove fire resistant buildings from the "fireproof" class. Residence halls are loaded with combustibles: furniture, bedding, draperies, floor coverings, and clothing. These, together with substandard combustible construction, can provide the scene for a horrible disaster should fire occur.

Deficiencies in building construction. This category covers many factors that may result in the small fire becoming a large one. Open shafts, combustible wall and ceiling finishes, lack of venting facilities for the removal of smoke and hot gases, inadequate and poorly lighted exits, and poorly installed or maintained power and air conditioning systems are all vital to the problem.

Fire Marshal Yockers of the state of California, in his

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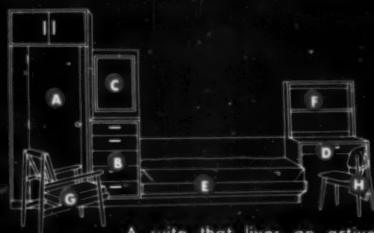
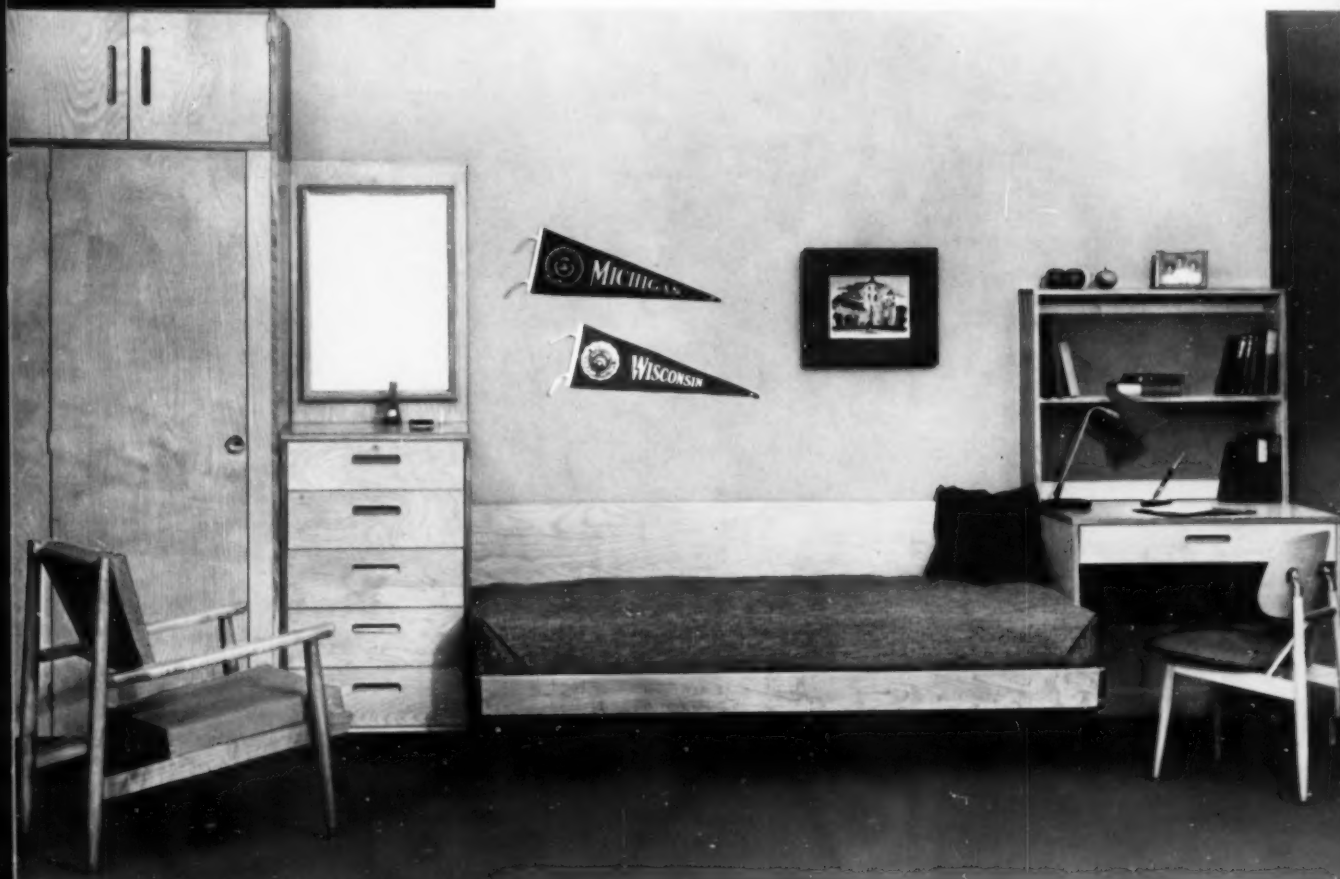
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*Wardrobe, desk and bookshelf may be expanded or contracted to fit wall space.

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report to the governor on his investigation of Our Lady of the Angels School fire, stated in part:

"This three-story building is typical of the buildings erected at the turn of the century. The number, width and location of exits and stairs were adequate for the occupant load of 1100 children. Exits were deficient, however, in that they were not completely enclosed with fire resistive walls and protected openings (the top floor had no fire door). In my opinion, the following contributed materially to the disaster: (1) storage of combustibles and waste materials in the stairwell; (2) lack of complete enclosure of vertical shafts; (3) combustible construction and finish in stairs, corridors and rooms; (4) lack of wired glass in transoms; (5) thick layers of paint on interior surfaces, and (6) lack of wired glass windows in stair enclosures."

He further stated: "I firmly believe that had there been automatic vent at the top of the stairwell, there would have been no loss of life in this fire." Think how inexpensive a vent in the building would have been compared to the loss of 94 lives plus hospitalization of 90 children and adults because of burns and injuries.

Study Fire Safety on Drawing Board

The public is again clamoring for legislation to prevent further catastrophes of this nature. Officials of schools, colleges and universities may be asking themselves what they can do to prevent such a disaster on the campus. They can survey existing residence halls for deficiencies to correct, and, if they are planning a new one, can take heed of lessons of the past and see that they are reflected on the architect's drawing board. As John C. Thorton, chairman of the A.I.A. committee on human safety, once stated: "The time to study fire safety is on the architect's drawing board, not after the building is completed."

Existing dormitories. Let us examine a typical dormitory built some 30 to 50 years ago. The building is probably two or three stories high, of brick or stone construction, with wooden floors and joists, and a wooden tarpaper covered roof. The central heating system is located in the basement which is not sprinklered or adequately separated from the living quarters above. Stairs are open from top to bottom. Corridor walls are plastered, but ceilings are surfaced with combustible fiberboard. Thin panel wooden doors open to the rooms, and the chances are good that wood framed, glass transoms are provided above the doors. Electric wiring is probably a knob and tube installation.

In this type of building the exits must be maintained accessible to the occupants in case of fire. The best assurance of this is installation of an automatic sprinkler system in the corridors, stairs, and storage and service areas, with an alarm to warn the fire department and building occupants.

The next most important item would be enclosure of vertical shafts. Stairs, elevators and dumb-waiters should be enclosed from top to bottom with fire resistive construction, and all openings therein protected with Class B self-closing fire protection assemblies. This will serve to prevent the spread of smoke, hot gases, and fire from one floor to another.

Corridors should be made fire resistive, and combustible surface coverings should be flame-proofed or replaced

with materials possessing a low flame spread rating so that fire will not rapidly spread through corridors as it did in the LaSalle Hotel fire in Chicago. Such materials are tested and rated by Underwriters Laboratories, Inc.; only those with a flame spread rating not higher than 75, or "slow burning," should be used. In that test, cement asbestos board, which will not burn, rates as "0" and red oak a "100" for flame spread. Some plywoods and veneered woods may run from 200 to as high as 500 on this scale.

Properly to separate rooms from corridors, paneled doors should be replaced with solid slab wooden doors at least 1½ inches thick. Transoms should either be removed and openings plastered over or the plain glass should be replaced with wired glass and the transom permanently closed.

The power and heating and ventilating systems should be checked, and poor wiring should be replaced and strung in conduit. Furnace and air ducts should be checked for leaks and provided with insulation where exposed combustible construction is being heated over 90° F. above ambient temperatures. Also, fire dampers should be provided for ducts that pass through fire resistive partitions, and controls should be provided that shut down the system if they become overheated or when fire occurs in the building.

Lastly, the basement should be equipped with automatic sprinklers, and communicating openings to the first floor should be closed or equipped with fire doors.

All of the foregoing improvements should be considered for proper protection of building and occupants.

New residence halls. With new buildings, college authorities can require the architect to consider the inadequacies of older buildings and not perpetuate the mistakes. They can specify that the residence hall be of fire resistive construction throughout; that vertical shafts be enclosed and openings protected; that interior wall and ceiling surfaces have a low rate of flame spread; that interior trim (frames around doors, window baseboard, and the like) be noncombustible or reduced to a minimum. They can specify that metal or solid slab wood doors be used and that transoms not be used.

For the ultimate in the protection of students, they can provide automatic sprinkler systems and automatic means of venting a fire should it occur.

With treatment such as has been set forth, they may then rest at night with a clear conscience, secure in the knowledge that the college or university has done everything in its power to protect students and property from the ever-present menace of uncontrolled fire.

Responsibility for Safety Is Administrator's

The responsibility to recognize dangers and to correct unsafe conditions is the university or college administrator's. As a matter of policy he should assure himself through a periodic inspection system that every possible fire safety practice is being followed. The expense involved in organizing and maintaining a program of good fire safety standards is negligible indeed when compared to the price paid when disaster strikes.

It can happen on any campus, and, if it should, the administrator must ask himself: "What part of the responsibility was mine?" ■



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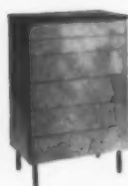
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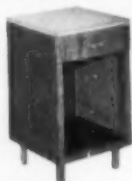
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Survey of trends

(Cont. from p. 33)

the latter, largely for the reason given earlier, the provisions of the College Housing Loan Program.

Almost 100 per cent of the cabinets are now built in, and the largest increase in built-in facilities seems to be the dresser and desk. Many institutions use both built-in and free standing furniture.

The bed is an important piece of equipment, as rest is essential to health. The box spring is reported the first choice for the residence hall bed, with the flat spring second, and the open coil, third. In the 1946-53 period a substantial percentage of open coil springs was used in men's halls; this has changed.

When the college furnishes the mattress, the 1946-53 first choice was the innerspring mattress. Today the innerspring mattress is even more popular (76 per cent of men's halls and 79 in women's halls), but there is a substantial increase in the number of foam rubber mattresses provided. Many respondents checked both types.

Table 3 — Linens Supplied by College

	1946-53		1954-60	
	Men (51 resp.) % checking	Women (32 resp.) % checking	Men (204 resp.) % checking	Women (161 resp.) % checking
Mattress	90%	88%	95%	94%
Sheets	24	9	32	23
Blankets	20	9	18	10
Hand towels	4	—	6	5
Pillows	52	56	50	57
Pillowcases	24	6	31	23
Bedspreads	14	12	24	12
Bath towels	6	3	6	7

Table 3 is concerned with the types of linens colleges provide student residents. The trend, it will be observed, is toward college provisions of linens.

Fire protection is a serious concern of every college administration. Men's residence halls, the survey shows, have the following protective devices: manual alarm, 50 per cent; automatic detection system, 8 per cent; sprinkler system, 10 per cent; fire extinguishers, 86 per cent; combined manual and automatic alarm system, 18 per cent; hose cabinets or racks, 53 per cent.

For women's halls, the percentages are: manual alarm, 54; automatic detection system, 11; sprinkler system, 6; fire extinguishers, 83; combination manual and automatic reporting system, 21, and hose cabinets or racks, 36.

Comparative Costs for Building and Furnishings

As to costs, the average men's residence hall cost \$716,290 in 1946-53; this has risen to \$765,565. Women's halls cost an average of \$455,697 in 1946-53; in the 1954-60 period the cost averages \$482,953. In most cases the men's facility houses more students than does the women's.

Cost of furnishings reported for men's halls seems to have declined, while in halls for women the 1946-53 average of \$28,253 rose to \$43,700 in the 1954-60 period.

In residence hall areas other than student rooms, the cost of furnishings in both men's and women's halls doubled over the cost in the previous five-year period.

The average cost per square foot for construction and furnishings rose from \$14.31 to \$15.99 in men's halls in the two periods covered, and from \$13.93 to \$16.55 in women's halls.



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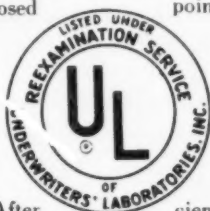
Safe on the Floor—Safe in the Mop—Safe in Storage

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SUPER HIL-TONE is chemically "non-oxidizable"—that is, it can't absorb oxygen when exposed to air, the common cause of heating and spontaneous combustion with widely used, dangerous oily floor dressings.

3 "Classified as to

Floor oils leave a 100% residue that penetrates to create a dangerous fire hazard. Super Hil-Tone is non-oily. — After sweeping only a 20% protective residue is left to condition and protect the surface — keeps finishes from drying out and becoming brittle. A Super Hil-Tone wear resistant film strengthens the finish and enhances it with a deep, lustrous sheen.



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In official tests, using the "TAG" Closed-Cup Tester, SUPER HIL-TONE failed to show flash point at temperatures up to 175° F. In fact, SUPER HIL-TONE discourages fire. Ask the Hillyard Maintaineer to demonstrate this important property.

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NEWS

New York Votes Pay Raise for City Colleges . . . Is Uniform Culture

Small College Danger? . . . Large Classrooms Subdivided . . . Archivists

Hold Workshop Session for Colleges . . . Two Wisconsin Colleges Merge

Two Colleges in Wisconsin Merge

PLATTEVILLE, Wis. — Platteville State College and Platteville Institute of Technology merged recently to form a single institution to become the third largest in the state college system.

The new institution, with 1800 students, will be known as Wisconsin State College and Institute of Technology at Platteville. Dr. Bjarne Ullsvik, president of the state college, will take over as head of the newly formed organization.

The merger became effective as the result of legislation approved last

spring by Gov. Gaylord Nelson. The new institution will continue to operate on two campuses, which are only about two blocks apart.

Two Texas Universities Offer Revenue Bonds

COLLEGE STATION, TEX. — The board of directors of the Agricultural and Mechanical College of Texas recently took bids on \$6 million of revenue bonds due for repayment from 1960 to 1979.

At the same time the University of Texas offered revenue bonds in the amount of \$4 million for repayment from the period of 1960 to 1979.

Calls Uniformity Greatest Danger of Small Colleges

NEW YORK. — Dr. Douglas M. Knight, President of Lawrence College, Appleton, Wis., stated in an address before the Rockefeller Institute that "colleges and universities that once reflected social conditions now create cultures of their own." The greatest dangers facing small colleges, he said, is not the threat of financial bankruptcy, but the steady trend toward a national uniformity in culture. Dr. Knight spoke at a two-day convocation of Rockefeller Institute.

Dr. Detlev W. Bronk, president of the institute, stated that the institution, having received a vast heritage from its predecessor schools of learning, is determined to build on it. Rockefeller Institute, which has shifted from pure science to an educational organization, will get most of its graduate students from the country's small colleges, he declared.

Society To Hold Session on University Archives

PHILADELPHIA. — The Society of American Archivists will hold a special workshop session on college and university archives at its annual meeting here in October. Special attention will be given to the problems of establishing and operating a new archival program in an educational institution.

Topics to be covered in the discussion include: (1) Where should the archives be located in the college or university structure? (2) By what methods can the archivist exploit the value of the information contained in the archives? (3) Should the archivist assume custody of historical manuscripts and private archives as well as the official archives of his college or university? (4) Where can trained



Twin daughters of Henry W. Bryant look on as their father hands James W. Bryant, his brother, who is business manager of Hampton Institute, Hampton, Va., a check for their graduation fee. The twins' mother, also shown, is a high school teacher in Fort Valley, Ga. Both parents are graduates of Hampton.

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personnel to direct a university archives be obtained?

The panel of specialists who will discuss these and other questions include Helen Chatfield, American University; F. Clever Bald, University of Michigan; Donald A. Sinclair, Rutgers; Jacqueline Bull, University of Kentucky; and Philip P. Mason, moderator, Wayne State University. All colleges and universities are invited to send representatives to the meeting, which will be held Friday, October 9, beginning at 10 a.m., at the University of Pennsylvania.

21,303 Donors Give Million to Cornell

ITHACA, N.Y. — Cornell University has joined the few educational institutions whose alumni, parents and friends have given it a million dollars in annual giving programs in a single year, it was announced by Norman R. Steinmetz of Manhasset, N.Y., chairman of the Cornell Fund for the last two years.

Alumni, nonalumni parents of students, and friends gave the university a total of \$1,008,610 during

the academic year which ended June 30. This is more than \$100,000 in excess of last year's figure, and is the largest amount ever achieved.

A total of 21,303 donors participated in the Cornell Fund. Individual gifts ranged up to \$17,643.

The Cornell Fund has eight main divisions. Gifts to the alumni annual giving program amounted to \$837,484; Cornell Plantations, \$11,417; Cornell United Religious Work, \$9,029; Law School Fund, \$45,472; Library Associates, \$9,349; Medical College Alumni Fund, \$54,323; Art Museum Associates, \$1,454, and Parents Fund, \$40,082.

Lehigh Seniors Continue Gift of Insurance

BETHLEHEM, PA. — Lehigh University seniors in June pledged \$135,000 in class insurance as their class memorial gift.

Elmer W. Glick, university treasurer, reported receipt of class insurance subscriptions from 446 members of the graduating class. Designation of the project for which this fund is to be used will be made at maturity at the 20th reunion of the class in 1979.

The plan calls for seniors to take out a 20 year endowment life insurance policy for \$300 at an annual cost of \$14. In the event of the death of the insured at any time during the 20 years, the \$300 value of the policy is paid at once, and such proceeds will be held in a special fund by the university for inclusion in the memorial gift in 1979.

The class insurance program at Lehigh was first adopted by the class of 1929. The next class to use this type of class memorial gift was that of 1938. There will be an uninterrupted flow of class gifts as the results of the annual class insurance programs adopted since 1938.

Penn State Finds Way To Enroll More Students

UNIVERSITY PARK, PA. — Pennsylvania State University expects to meet the challenge of expanding enrollments without falling back in its growing effort to achieve academic distinction, President Eric A. Walker said recently.

Insisting that quality and quantity are not incompatible, the president told alumni that a better retention record scholastically will enable the

Faster service Cleaner conditions

WITH NORRIS MILK DISPENSERS

New Norris N-10 Super Dispenser. Holds two five-gallon cans. Adjustable temperature control. 39 1/4" high, 27" wide, 17 1/2" deep.

Meets 3A Sanitary Standards



N-15 Manhattan Dispenser on N-15 Refrigerated Storage Stand. Each holds three five-gallon cans. Dispenser is 39 1/4" high, 37 1/2" wide, 17 1/2" deep. Stand is 34 1/4" high, 39 3/4" wide, 24" deep.

NORRIS Dispensers not only provide faster service in your lunchroom or cafeteria, but they eliminate messy cartons and bottles as well. And of course you know you are serving tastier milk —serving it the way it should be served, cold and aerated. There is a Norris Dispenser for every type of milk serving. Ask your dairy.

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university to enroll 6 per cent more students in 1959 than it did in 1958.

"And we'll achieve this growth," he added, "without adding a single student to our freshman quota of a year ago."

Of the more than 5000 new students qualified to begin classes next fall, President Walker said that some 95 per cent finished in the upper two-fifths of their high school graduating classes. Last year, this figure was 75 per cent.

An expanding student aid program last year provided \$747,000 in scholarships, grants and fee remissions, and \$170,000 in student loans.

U.N.C.F. Colleges Get Second '59 Allocations

NEW YORK. — The United Negro College Fund distributed \$326,000 to its 33 member colleges and universities this summer, according to W. J. Trent Jr., executive director of the fund.

"This is the second allocation made to the member schools during 1959," Mr. Trent said. "It brings the total amount distributed during the current calendar year to \$903,000."

Bruce Barton, chairman of the board, Batten, Barton, Durstine & Osborn, and 1959 U.N.C.F. national campaign chairman, reported that this year's nationwide fund raising appeal for the colleges is running ahead of last year's.

More than 4200 volunteers are working in 181 campaign communities across the country. The 1959 appeal to raise 10 per cent of the annual educational budgets of the 33 U.N.C.F. colleges began in April and will continue through December.

Members of the College Fund are private, accredited institutions. The colleges use the U.N.C.F. allocations to provide scholarship aid, augment faculty salaries, and buy library books and laboratory equipment.

National Foundation Aids Professional Education

NEW YORK. — Expenditures totaling \$1,010,486 to assist the educational programs of the medical and allied professions were recommended by the advisory committee of the National Foundation at their recent semiannual meeting. The amount is in addition to the nearly \$31 million that has been authorized for professional education since 1938. (Continued on Page 64)

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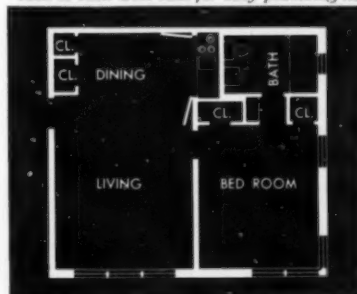
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(Continued From Page 63)

New for this year was the recommendation that \$65,000 be authorized to provide fellowships for physicians and surgeons to study in the clinical fields of rheumatology and the management of congenital malformations of the central nervous system. Fellowships will be offered to residents or to more experienced physicians who desire this type of opportunity.

The committee recommended continuation of current support to a number of medical schools that have been conducting pilot studies in teaching

the concept and basic technics of rehabilitation to undergraduate and graduate medical students. The following extensions were recommended for approval:

Creighton, a three-year grant of \$75,700; Marquette, a three-year grant of \$85,688; Western Reserve, a three-year grant of \$157,464, and Yale, two three-year grants of \$99,906.

Ten additional participants in these pilot studies with grants recommended at prior meetings of the advisory committee are at the medical

schools at George Washington, Pennsylvania, New York University, Cornell, Tulane, Stanford, North Carolina, Minnesota, Baylor and Washington University, St. Louis.

Finds ETV Places More Demands on Student

FARMINGDALE, N.Y. — A recent experiment at the state Agricultural and Technical Institute here indicates that educational television places more demands on the student than do regular classes, is still costly, and disrupts the close teacher-student relationship.

The experiment, which started on February 2 and ended on May 26, involved 546 second-year students of the junior college.

Examinations showed no significant difference between the grades of TV students and the control group. Some of the students thought the television course was more difficult than the regular course in that it placed more responsibility on them. Several students hesitated to cooperate with the new teaching medium. Faculty members found the experiment worth while and suggested further investigation.

"Chicago" Plays Big Part in Urban Renewal Plan

CHICAGO. — The University of Chicago has announced major building plans that will push the estimated total value of its new Hyde Park campus facilities to more than \$259 million by 1964.

Vice Chancellor John I. Kirkpatrick, who coordinates university planning efforts, said that the expansion program over the next five years will boost the campus investment by nearly 25 per cent. The existing valuation is approximately \$210 million.

"The expansion plan provides dramatic and concrete evidence of the university's faith in the future of the renewed Hyde Park-Kenwood community where the Midway campus is located," the vice chancellor declared last month.

"Nearly \$50 million of major construction in the area is planned during the next five-year period on University of Chicago projects alone."

The \$49.5 million budgeted for the next five years provides for a Center for Continuing Education, single and married student housing, new Graduate School of Business facilities, new hospital units, and other buildings for

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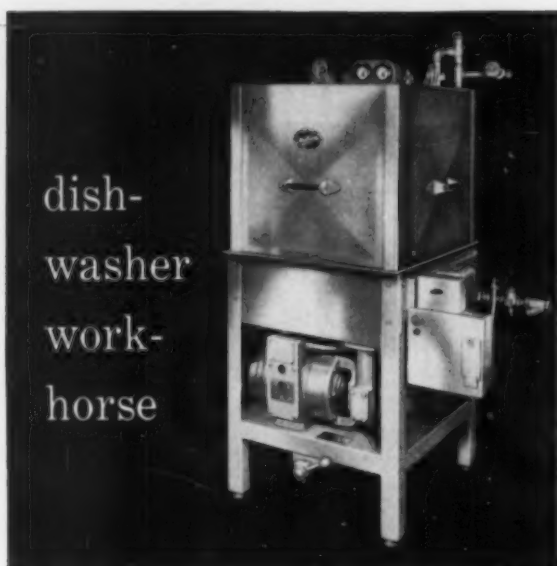
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Hobart's exclusive power wash and above-and-below rinse give you today's finest wash-rinse system for quality results at lowest labor costs.

Electric timed control or semi-automatic models available...they reduce operator supervision...and assure maximum washing and rinsing efficiency. The Hobart Manufacturing Co., Dept. 301, Troy, Ohio.

Hobart Revolving Wash and Rinse Principle. All AM Series dishwashers incorporate this feature that assures thorough coverage of the entire rack area. Door interlocking device prevents opening doors during wash and rinse.



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more undergraduate and graduate teaching and research.

During the 15 year period from 1949 to 1964, the University of Chicago will have spent some \$87 million in new construction, renovation and neighborhood improvement.

The university's program includes (1949-59): (1) new campus construction, \$30 million; (2) renovation of campus buildings, \$2.1 million; (3) neighborhood improvement, \$6 million, and (1959-64): (1) new campus construction under way now, \$8.4 million; (2) new campus construction planned by 1964, \$30 million; (3) renovation and demolition, \$9 million, and (4) neighborhood improvement, \$2 million.

Mr. Kirkpatrick pointed out that \$131 million in public and private funds are being funneled into the Hyde Park-Kenwood neighborhood through the urban renewal program and the expansion plans of other Hyde Park institutions. This is in addition to the University of Chicago's expansion plans.

Queens of North Carolina Gets Challenge Gift

CHARLOTTE, N.C. — Queens College has accepted a challenge gift of \$360,000 from Charles A. Dana, manufacturer-philanthropist of New York City. The college is to raise a like amount by next March.

The funds will be used to construct a new classroom building to be ready for use in the 1960-61 session, the remodeling and equipping of Atkinson Science Building, and the renovation of Burwell Hall, the administration building. One-fourth of the total sum of \$720,000 will be added to the endowment of the college.

The donor operates 11 automotive parts plants in the United States and six in Europe. He recently made a gift of \$400,000 to Davidson College, the Presbyterian college for men, located 20 miles from Charlotte.

The new three-story classroom building will measure 18,000 square feet and will be constructed so that movable metal partitions can allow flexibility in classroom size. Initially the building will have 18 small classrooms of the seminar type, four large classrooms, and one large lecture room accommodating 150 students. The building will be completely air-conditioned. Contracts for the building will probably be let in January.

Illinois Divides Larger Classrooms

URBANA, ILL. — An excess of big rooms is being divided by the University of Illinois into smaller areas. Two usable spaces out of one is made by quick erection of dividing walls.



Harlan D. Bareither (left), director of the central office on use of space, found that 12 per cent of classrooms could hold 80 or more students, but that only 2 per cent of classes consist of lectures to groups of that size. He also found that 92 per cent of classes have 40 or fewer students, and 83 per cent have 30 or fewer.

This soundproof nonbearing wall being put in Room 215 of David Kinley Hall transformed it from a capacity of 88 seats to a 48 seat classroom, plus a comfortable seminar room for the university's new Graduate School for Business Administration.

In other situations the freed space is used for offices or other uses, and large offices may be broken up to increase efficiency. The divider can be placed in two days, does not alter room construction, and can be removed quickly if needs change. Standard size wall sections close space from floor to ceiling.

Auditing Conference Scheduled for September

LAFAYETTE, IND. — The third annual conference on institutional auditing and business procedural problems will be held September 10 and 11 at Purdue University. The meeting will consist of round-table discussions on special topics to be introduced by dis-



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cussion leaders. The Association of College and University Auditors is the sponsoring organization.

Any institution of higher education, regardless of whether its audit function is formally organized, may send one or more representatives to the meeting. One discussion topic is designed especially for colleges whose audit function is carried on informally: "Organizing and Administering the Internal Auditing Function."

The program can be obtained from Richard Hickam, internal auditor, Indiana University, and a registration

blank from Al Dawson, internal auditor, Purdue University.

Gift From All-Faculty Consulting Firm

UNIVERSITY PARK, PA. — An all-faculty consulting firm, which is organized as a nonprofit corporation, for the second year has presented a grant of \$1000 to Pennsylvania State University to promote basic research in the arts and sciences.

Thirty-two faculty members are currently affiliated with the firm,

which is known as Pennstate Research Associates.

Dr. Edwin R. Fitzgerald, associate professor of physics, spearheaded organization of the corporation several years ago to pool faculty talents in consulting work. The organization is believed to be the only one of its kind in the United States.

Among members of the firm are chemists, physicists, engineers, biochemists, mathematicians, fuel technologists, experts in business administration, and a philosophy professor.

President Eric A. Walker, in accepting the grant, said university regulations permit faculty members to do up to four days of consulting work each month.

Crerar and Illinois Tech Libraries To Merge

CHICAGO. — John Crerar Library, one of the world's largest collections of technical, scientific and medical literature, is to move to the Technology Center campus of Illinois Institute of Technology.

The Crerar Library, now located in downtown Chicago, will have custody of the Illinois Institute's technical library collection and will be located in a new public library building to be constructed on the Tech campus.

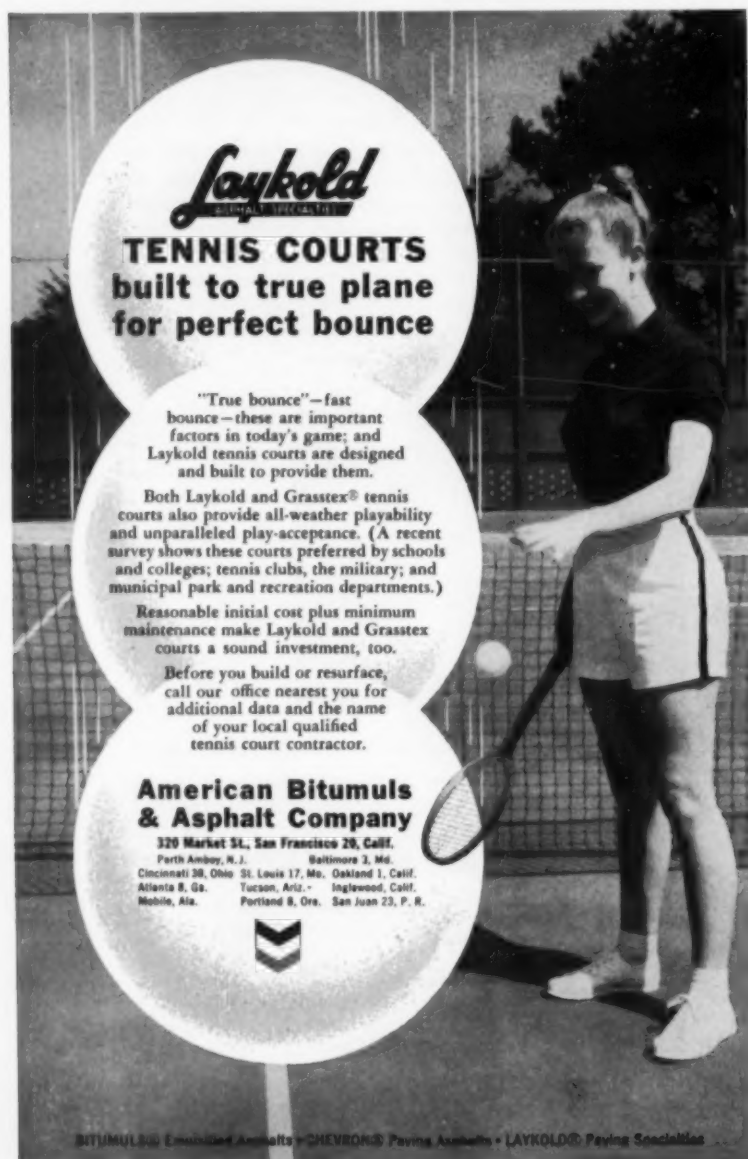
The move will provide a location for the library in a center of technological education and scientific research, will permit expansion and improvement of its services, and will realize economies in operation. Students, faculty members, and scientific personnel of Technology Center comprise the largest single group of users of the Crerar Library.

The library will continue to be under the jurisdiction of the Crerar board. Illinois Tech will turn over its estimated 125,000 engineering and scientific books and periodicals; the Crerar Library has approximately a million books and periodicals.

Housing Boom at Santa Barbara Campus

SANTA BARBARA, CALIF. — University of California officials have announced a substantial building program on the Santa Barbara campus of the university.

Two 420 unit residence halls on campus are now under construction. The men's residence hall will be available in the fall, and the women's hall



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for perfect bounce


"True bounce"—fast bounce—these are important factors in today's game; and Laykold tennis courts are designed and built to provide them.

Both Laykold and Grastex® tennis courts also provide all-weather playability and unparalleled play-acceptance. (A recent survey shows these courts preferred by schools and colleges; tennis clubs, the military; and municipal park and recreation departments.)

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Before you build or resurface, call our office nearest you for additional data and the name of your local qualified tennis court contractor.

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will be opened during the spring semester. When the two structures are completed, 1700 students will be living in university operated halls.

In addition, private capital is investing more than \$3 million in residence halls within walking distance of the campus. These facilities will provide housing for 700 students, more than doubling the accommodations previously available at Santa Barbara.

\$20,000 Ford Grant to Kenyon College

GAMBIER, OHIO. — The Ford Foundation has made a grant of \$20,000 to Kenyon College for a five-year program of research in public affairs, governmental and political processes, and public policies. The program is designed to emphasize the relation between research and teaching by encouraging faculty-student cooperation in research projects.

Members of the departments of political science and economics, and of any other relevant disciplines, will invite students to participate with them in various studies that already are in progress. These include explorations of such subjects as the president and individual liberties; constitutional democracy in the United States and Britain, and monetary policy.

The Kenyon curriculum has been revised to permit year-long as well as semester courses. The new arrangement makes possible a greater amount of independent research by candidates for a degree with honors, since it permits the organization of intensive seminars extending across the junior and senior years.

Salary Increases for N.Y. Municipal Colleges

NEW YORK. — The Board of Higher Education of New York City recently approved salary increases for faculty members of the municipal colleges for which it is responsible. The new rates, which will become effective October 1, have been submitted to the city board of estimate for approval at a later date.

The increases in pay would average \$580 for full professors, \$472 for associate professors, \$391 for assistant professors, and \$308 for instructors. Increases were also authorized for certain other categories, including faculty members of community colleges, librarians, registrars and science assistants.

The present maximums for teachers in the municipal colleges are as follows: full professors, \$15,400; associate professors, \$10,900; assistant professors, \$9,500, and instructors, \$8,400. The new rates will be respectively, \$16,000, \$11,500, \$9,900 and \$8,700.

Because of the interest of the Board of Higher Education in equalizing somewhat the annual increments for those who have not reached maximum scale, the pay raises on the salary schedule vary considerably.

The increases for full professors range from \$350 for those in their

fourth year of service to \$1300 for those in their seventh year. Professors reach the maximum salary in their ninth year. Under the old salary schedule their last increment was \$1500; it now will be \$900.

Offer \$18 Million Bonds

BERKELEY, CALIF. — The regents of the University of California recently offered \$18 million of housing system revenue bonds for purchase by the general public. The obligations will become due from 1961 to 1998.

21 YEARS OF CONTINUING SERVICE TO THE FIELD OF EDUCATION AS SPECIALISTS IN TUITION PAYMENT PROGRAMS

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How can we say this dorm bed won't sag?

(...and mean it)



Among the many
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Illinois
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Every dorm bed maker says his bed won't sag. Some say it with fingers crossed—Harvard says it with absolute confidence. Reason? A completely new type of spring wire suspension—the Spiro-Spring. Exclusively Harvard's in America. Not the usual zig-zag or cone spring, but a unique "flat" coil that *puts more wire, therefore more support, in every square foot of sleeping surface.* Terrific tensile strength. No need to build the bed with a "hump" to compensate for future sag tendencies. Spiro-Springs are suspended flat, and they *stay flat.* Result? A dorm bed with greater seating and sleeping comfort, better appearance, through extra years of hard service. Write today for the complete story of the new . . .

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NAMES IN THE NEWS

Dr. Miller Upton, president of Beloit College, Beloit, Wis., has announced an administrative reorganization. **Hugh D. Allen**, formerly director of public relations and development for the college, has been named vice president for development. He joined



Hugh D. Allen



Donald Marburg

the Beloit staff in 1956 after wide experience in Y.M.C.A. and educational administrative work. **Donald Marburg**, former controller of American University of Beirut, Lebanon, and an assistant treasurer of the University of Vermont, takes over the new post of vice president for business operations. **Victor A. Emilson** will continue as business manager, assistant secretary, and assistant treasurer and will assist Vice President Marburg in directing business operations, including an expanded program of financial aid for students.

Albert F. Gallistel, director of physical plant planning at the University of Wisconsin, Madison, officially retired from his post July 1, after having



A. F. Gallistel

served for 52 years as a member of the university's building and grounds staff as draftsman, designer, superintendent of construction, and superintendent of buildings and grounds. Beginning August 1, Mr. Gallistel will serve as part-time consultant to the university on a special project, a master specification for future construction. Mr. Gallistel was president of the National Association of Physical Plant Administrators of Universities and Colleges in 1935 and 1956 and for many years served as its secretary-treasurer. He has been active in civic and governmental affairs in Madison, Wis. He is a registered architect.

Arland F. Christ-Janer, business manager of St. John's College, Annapolis, Md., has been appointed vice president and treasurer of the college.

Dr. Mary I. Bunting, dean of Douglass College at Rutgers University, the

state University of New Jersey, is the new president of Radcliffe College, Cambridge, Mass. She succeeds Dr. Wilbur K. Jordan, president since 1943.

James W. Reynolds, professor of higher education at the University of Texas, Austin, has been elected president of the Association for Higher Education of the National University Extension Association. He assumes his new office on September 1.

Hubert M. Johnson, formerly director of all procurement activities at Johns Hopkins Hospital, Baltimore, became general purchasing agent



H. M. Johnson

of the University of Rochester, Rochester, N.Y., on July 15. He succeeded Warren W. Irwin, who had been purchasing agent there for 34 years, the only man to hold the position. Mr. Irwin has retired.

Harle Grady Bailey Jr., former lieutenant colonel in the U.S. Army, is now chief accountant in the business office at the University of South Florida, Tampa. Andrew Carroll Rodgers, staff member of the housing division of the University of Florida since 1946, has been named director of procurement and acting director of auxiliaries at the University of South Florida. Frank H. Spain Jr., assistant director of admissions and registration at Kentucky Wesleyan College, has been named registrar at the University of South Florida.



Peggy Phillips

has been named director of development at Christian College, Columbia, Mo.

Dr. Grayson Kirk, president of Columbia University, has been appointed U.S. representative on the North Atlantic studies committee. The committee, established by the council of the North Atlantic Treaty Organization, is to work out recommendations for expanding N.A.T.O. cultural activities.

(Continued on Page 72)



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For additional information, use postcard facing Cover 3.



S. A. Callisen

Dr. Sterling A. Callisen, former dean of education at the Metropolitan Museum of Art in New York City, resigned July 1 to become president of the Parsons School of Design in New York. Before joining the museum 10 years ago, he had served as dean at Wesleyan University and had taught history of art at Harvard and at Rochester universities.

George N. Kollintzas, formerly assistant to the dean of students at Loyola University, Chicago, has been ap-



G. N. Kollintzas

pointed assistant dean of students. **J. David Smith** becomes assistant to the dean of students. Both appoint-



J. David Smith

ments, which become effective immediately, were announced by **Harry L. McCloskey**, dean of students.

Dr. James Stacy Coles, president of Bowdoin College, Brunswick, Maine, since 1952, has been named director of Research Corporation. The corporation distributes approximately \$1.2 million annually in grants to foster basic scientific research in colleges, universities and scientific institutions.

John A. Pond, director of purchasing at the University of Colorado, resigned recently to become director of the University of Chicago Alumni



John A. Pond

Foundation. Mr. Pond, a member of the Colorado staff since 1953, goes to Chicago September 1. Previously Mr. Pond had been director of purchasing at New York University-Bellevue Medical Center, New York City, and assistant purchasing agent at the University of Chicago. For a two-year period he was procurement chief of the metallurgical laboratories of the Manhattan Project, the atom bomb development, in Chicago. He is treasurer of the National Association of Educational Buyers.

The Louisiana State University Board of Supervisors recently established four vice presidencies to meet the university's expanding administrative needs, according to an announcement by **President Troy H. Middleton**. On the Baton Rouge campus, **Dr. Daniel Borth's** position of dean of administration was dropped and he was appointed to the new position of executive vice president of the university. **Milton M. Harrison**, present dean of the law school, became vice president in charge of academic affairs. On the New Orleans campus, **Dr. Homer L. Hitt**, present dean, was named vice president of L.S.U. activities in New Orleans. **Dr. J. G. Tregle Jr.**, professor of history and chairman of the division of social studies on the New Orleans campus, was appointed dean of academic affairs. **Dr. William W. Frye**, present dean of the school of medicine in New Orleans, was redesignated vice president of L.S.U. and dean of the school of medicine. **Walter B. Calhoun**, associate controller on the Baton Rouge campus, was promoted to the position of controller.

(Continued on Page 74)

LOOK AT THE FACTS!



- 1** In the washrooms of many colleges and universities Mosinee Turn-Towls, compared to the service previously used, have reduced the cost of towel service from 25% to 50%.
- 2** In a 16-day test, an Eastern university found that the janitorial expense in connection with towel service was reduced 65% when controlled type Turn-Towls were in use.
- 3** Quality of service goes up as costs go down because Turn-Towls have faster absorbency than any towel on the American market.

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DIRECTORY OF ASSOCIATIONS

National Federation of College and University Business Officers Associations

President: Charles H. Wheeler III, University of Richmond; secretary: Kenneth Dick, University of Idaho.

National Federation Consulting Service, 44 Washington Street, Wellesley Hills 81, Mass. Irwin K. French, executive director.

Association of College and University Housing Officers

President: J. Arthur Pringle, University of Washington; secretary-treasurer: Leonard A. Schaad, University of Michigan.

Convention: Aug. 2-5, University of Colorado, Boulder.

National Association of College Stores

President: Sam Hanna, DePauw Bookstore, Greencastle, Ind.; general manager: Russell Reynolds, Box 58, 33 West College Street, Oberlin, Ohio.

Association of College Unions

President: Chester A. Berry, University of Rhode Island; secretary-treasurer: Edgar A. Whiting, Cornell University; editor of publication: Porter Butts, University of Wisconsin.

Convention: April 24-27, Indiana University, Bloomington.

National Association of Educational Buyers

President: Carl A. Donaldson, University of Nebraska; executive secretary: Bert C. Ahrens, 1461 Franklin Ave., Garden City, N.Y.

Convention: May 2-4, Hilton Hotel, Pittsburgh.

National Association of Physical Plant Administrators of Universities and Colleges

President: R. F. Gingrich, Kansas State University; secretary-treasurer: John H. Sweitzer, Earlham College, Richmond, Ind.

Convention: May 8-11, Statler Hotel, Boston.

Associations of College and University Business Officers American Association

President: Paul G. King, Tennessee A. & I., Nashville; secretary-treasurer, Sinclair V. Jeter, Clark College, Atlanta, Ga.

Central Association

President: Harlan Kirk, Lawrence College, Appleton, Wis.; secretary-treasurer, James J. Ritterskamp Jr., Washington University, St. Louis.

Eastern Association

President: John F. Meck, Dartmouth College; secretary-treasurer: Kurt M. Hertzfeld, University of Rochester.

Convention: Nov. 29-Dec. 1, Boston.

Southern Association

President: Clarence Scheps, Tulane University; secretary: C. O. Emmerich, Emory University.

Western Association

President: Ernest Conrad, University of Washington; secretary: James Brainerd, Menlo College.

American College Public Relations Association

President: Howard S. Curtis, Brown University; executive director: W. Noel Johnston, 1785 Massachusetts Ave., Washington, D.C.

Canadian Association of University Business Officers

President: J. A. Wheeler, bursar, Mount Allison University; secretary-treasurer: D. S. Claringbold, treasurer, Hart House, University of Toronto.

American Alumni Council

President: Donald E. Smith, University of Rochester; executive director: Ernest T. Stewart, 1785 Massachusetts Ave., N.W., Washington 6, D.C.

College and University Personnel Association

President: Orie Myers, Emory University; executive secretary: Donald E. Dickason, University of Illinois. Permanent headquarters, 809 S. Wright St., Champaign, Ill.

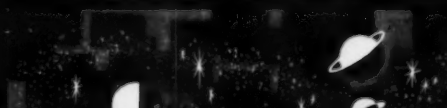
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and Quinn M. Coco, formerly assistant controller and internal auditor, became associate controller.

Dr. Paul H. Morrill has left his position as director of public relations and director of the centennial campaign at Wooster College, Wooster, Ohio, to become president of Park College, Parkville, Mo. He succeeds Marion J. Stocker, acting president of Park College since last fall.

Donald M. Love, Oberlin College secretary, has been named dean of the college of arts and sciences for one year. He succeeds Blair Stewart, who resigned recently to become president of the newly organized Associated Colleges of the Midwest. The trustees of the college also announced the appointment of Robert R. Barr, assistant secretary, as acting secretary for one year, effective July 1. Mr. Love will continue to serve as acting president of Oberlin during the absence of President William E. Stevenson, who will be in Tanganyika, Africa, on a government mission until September 1.

The Very Rev. Brother Jerome, president of St. Francis College of Brooklyn from 1952 to 1958, died recently following a long illness. He was 62 years of age.

classified advertising

POSITIONS WANTED

Business Manager—Treasurer—Eight years' successful experience as chief business officer; experienced accounting, budgetary control, purchasing, construction, housing, buildings and grounds; age 37; married; MBA. Write Box CW 477, COLLEGE AND UNIVERSITY BUSINESS.

Director of Food Service—Ten years college food service; would like to relocate; available immediately; can furnish complete resumé. Write to Box CW 475, COLLEGE AND UNIVERSITY BUSINESS.

Food Service Directors—Desire operation of large college dining service; top experience and results guaranteed by man and wife team, now employed; prefer Florida or Georgia; consider other Southern location. Write Box CW 478, COLLEGE AND UNIVERSITY BUSINESS.

Grounds Superintendent—University graduate with major in horticulture; diversified experience in landscape; thoroughly familiar with greenhouse management, exotic plants, turf management, labor, et cetera, et cetera. Write to Box CW 449, COLLEGE AND UNIVERSITY BUSINESS.

POSITIONS OPEN

Assistant Food Service Director—College student union; small university in midwest; excellent liberal arts tradition; fringe benefits; ideal geographical location. Write to Box CO 318, COLLEGE AND UNIVERSITY BUSINESS.

Accountant — Supervisor — Large eastern coeducational college; thorough familiarity with institutional accounting prime requisite; excellent staff benefits program; our staff is aware of this advertisement; send complete resumé of background and experience to Box CO 315, COLLEGE AND UNIVERSITY BUSINESS.

Architectural Draftsman—Large southeastern university; to perform drafting duties in connection with construction, remodeling and repair of major campus buildings; experience in building construction required; college training in architecture preferred; permanent employment. Send resumé to Box CO 317, COLLEGE AND UNIVERSITY BUSINESS.

Chief Accountant—Man, to be responsible for all accounting, periodic reports and office supervision; an opportunity for development and advancement. Send resumé to the Treasurer, SMITH COLLEGE, Northampton, Mass.

College Food Service Directors — Leading quality-minded college and university contract feeding company has openings for capable, personable, young male graduates as college food service directors, long hours, long vacations, best income, plenty of room to advance, due to continuing rapid expansion. If you can qualify, and enjoy campus environment, send personal data sheet to Box CO 289, COLLEGE AND UNIVERSITY BUSINESS.

Foods Manager—Ohio Union—Supervision of large cafeteria, soda fountain, service dining room, and extensive party service including 1350 seat ballroom; college Degree in institutional food management and two years top supervisory experience required; modern air conditioned building, 8 years old, has excellent equipment layout; position open August 1. Write Director, Ohio Union, OHIO STATE UNIVERSITY, 1739 North High Street, Columbus 10, Ohio.

Food Service—2 Managers—Women; 100 on staff, 4,000 meals per day in 2 locations on campus; institutional training with college feeding experience preferred; salary open; positions carry usual fringe benefits, meals, vacation, 5-day week. Write to Box CO 306, COLLEGE AND UNIVERSITY BUSINESS.

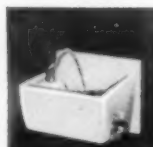
Food Service Directors—Excellent opportunities are available for young men and women with food service experience; a leading food service caterer needs managers immediately for: colleges and schools; salary open; relocate. Send resumé to Box CO 285, COLLEGE AND UNIVERSITY BUSINESS.

New Staff Operations—Expansion of new student union facilities: Operations Manager, Night Manager, Food Production Manager, Catering Manager, Program Director and Assistant Program Director; all openings effective September 1; excellent advancement opportunities, retirement, sick leave, social security and other staff benefits. Apply Roy V. Loudon, Jr., Personnel Director, UNIVERSITY OF NEBRASKA, Lincoln, Nebr.

They're TAYLOR-made.. they're streamlined



• It's new, it's a Halsey Taylor first... the WALL-MOUNT Cooler. Mounted on the wall, off the floor! No exposed fittings, easy to keep clean, no corners to catch dirt!



Ultra modern, recessed and face-mounted fountains, and battery types as well! The last word in performance and appearance.

..built for today's modern architecture

To get the newest in fountains or coolers, all you need do is to specify Halsey Taylor. Then you know you can meet the most modern architectural decor! Ask for latest catalog or see Sweet's.

The Halsey W. Taylor Co., Warren, Ohio

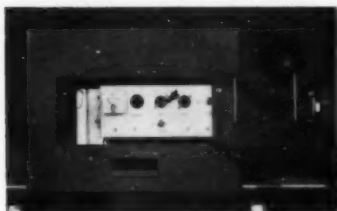


WHAT'S NEW

TO HELP you get more information quickly on the new products described in this section, we have provided the postage paid card on page 83. Circle the key numbers on the card which correspond with the numbers at the close of each descriptive item in which you are interested. COLLEGE and UNIVERSITY BUSINESS will send your requests to the manufacturers. If you wish other product information, just write us and we shall make every effort to supply it.

Honeywell Fire Alarm System Functions Automatically

Automatic fire detection and signaling equipment is offered in the Honeywell Fire Alarm Systems. They not only signal that there is a fire, but indicate its location, and signals can be connected to sound at both the institution and the local fire department. Test buttons for testing



the system and conducting fire drills are included in the panels which have locking doors. The W247 Panel illustrated is for larger buildings and for smaller buildings Panel W237 is available. Minneapolis-Honeywell, 2747 Fourth Ave. S., Minneapolis 8, Minn.

For more details circle #544 on mailing card

Disposable Cleaning Cloths in Handy Dispensing Package

A white, glassine-lined bag containing 50 folded Masslinn Cleaning Cloths in the 24-inch square size is now available for institutional use. The chemically treated, disposable cloths for easy dusting and polishing without back-tracking are efficiently dispensed from the handy new package. Masslinn disposable cloths are equally efficient when used with the Masslinn Sweeping Tool or for furniture dusting. Chicopee Mills, Inc., Non-Woven Fabrics Div., 47 Worth St., New York 13.

For more details circle #545 on mailing card

Splayed Base Shapes in Ceramic Glaze Vitritile



Wall surfaces are protected when the Splayed Base ceramic glaze Vitritile is used in corridors and rooms where equipment is moved. Six new shapes are offered in the line which conforms with the Natco "6T" Vitritile facing tile series. The

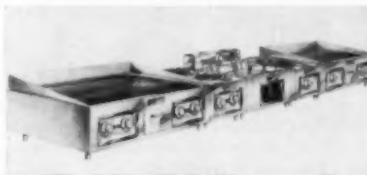
Splayed Base Shapes are adaptable to every wall surface, including plaster, which might become chipped, scratched or otherwise defaced. It also facilitates sanitation in kitchens, laboratories, home economics departments and other areas. Natco Corp., 327 Fifth Ave., Pittsburgh 22, Pa.

For more details circle #546 on mailing card

Electric Cooking Equipment in "Thunderbolt" Series

Designed to provide all counter cooking equipment required in colleges and other institutional kitchens, the new "Thunderbolt" Series of heavy duty electric cooking equipment includes fry kettles, large and "giant" griddles, hot plates and food warmers. All pieces in the line are available in stainless clad conventional free-standing units as well as in flexible, modern built-in units for customized kitchen installations.

The "Thunderbolt" fry kettles have safety controls to prevent overheating of grease no matter how long they are turned on. "Frying Guides" are permanently affixed to front panels with recom-



mended frying temperatures in full view of the chef. The heavy-duty "Thunderbolt" griddles in two sizes have independent controls, permitting the handling of various types of food at the same time, and have sufficient capacity for heavy institutional service. The hot plates and food warmers in the line have specially developed controls and all pieces are sturdily built for heavy-duty institutional service. Toastmaster Division, McGraw-Edison Co., Elgin, Ill.

For more details circle #547 on mailing card

Fire Retardant Paint Slows Fire-Spread Rate

While the new Dupont interior flat enamel does not stop fire, it slows down the spreading rate as the material is fire retardant. The paint, which foams and forms a spongy insulating layer when subjected to heat, is the result of five years of research. It is equal in appearance to the finest finishes and is available in seven colors and white. It can be applied by brush, roller or spray gun and the manufacturer recommends three coats for optimum results, especially in stair wells, maintenance departments, kitchens and

other areas where fires might be more apt to start. E. I. du Pont de Nemours & Co., Wilmington, Del.

For more details circle #548 on mailing card

Listening Center Kit Has Eight Headphones



Eight durable new Alnico magnet double headphones with six-foot cords are contained in the new Model LC-8A listening center kit. Designed to convert any Newcomb transcription player-P.A. system to a listening center, the kit has a connecting unit and a plywood compartmented Fabrikoid-covered case for storage and carrying. Newcomb Audio Products Co., 6824 Lexington Ave., Hollywood 38, Calif.

For more details circle #549 on mailing card

Nightingale Lamp Line for Residence Areas

A new line of Nightingale lamps is announced for use in dormitories and other housing facilities. Model No. 319 illustrated is a desk or reading lamp which swivels horizontally and serves as a study lamp, reading lamp, and general indirect room illumination. The "built-in" unit is easily installed and can be fastened to a desk or other unit, minimizing the possibility of theft or breakage.

Other lamps in the new line include floor, table and wall models. They all feature a reflector with baked white enamel



lining resting on a diffuser which combines both direct and indirect illumination. Adjustable Fixture Co., 110 E. Mason St., Milwaukee 2, Wis.

For more details circle #550 on mailing card

(Continued on page 76)

Wall-Mount Water Cooler Leaves Floor Clear

Cleaning and maintenance of floors in corridors and rooms is facilitated with the



new Wall-Mount water cooler recently introduced. There are no outside plumbing connections on the attractive model which has stainless steel top with Wall Face Splash contoured for ease of cleaning. **The Halsey W. Taylor Co., Warren, Ohio.**
For more details circle #551 on mailing card

Square Dial and Round Clocks in "Flexchron" Clock System

Newly styled clocks have been developed specifically as additions to the new Standard "Flexchron" Clock and Program System. The automatic, fully-corrected clock system now employs the new square dial clocks and newly styled round clocks with markers instead of numerals. The new models, in 10, 12 and 16-inch sizes, are also supplied with other movements for use in impulse systems and as individual clocks. **The Standard Electric Time Co., 89 Logan St., Springfield, Mass.**

For more details circle #552 on mailing card

USS Vinyl Coated Steel Has Variety of Uses

Applications in many different areas are possible with the new USS product, Vinyl Coated Steel sheet. It offers economies, rugged physical qualities and attractive surface treatment. Some uses of the new product include movable steel wall partitions, folding chairs, doors and portable room coolers, among many others.

USS vinyl coated steel sheet is produced by curing and bonding liquid vinyl



plastisols to sheet steel in a continuous coating process. It can be embossed with any texture that can be engraved on a printing roll and produced in any specified color with assurance of color uniformity. **United States Steel Corp., 525 William Penn Place, Pittsburgh 30, Pa.**

For more details circle #553 on mailing card

Four Acoustical Materials for Incombustible Ceilings

Golden and Silver Travertone, Deluxe Minatone and Gridtone are the four new deluxe acoustical materials recently introduced by Armstrong. Golden and Silver Travertone are both patterned after authentic travertine marble and contain hundreds of golden or silver flecks imbedded in the fissures.

Deluxe Minatone has a unique, non-directional arrangement of small perforations which extend onto the beveled edges of the tile, producing an unbroken pattern effect when installed. Newest of the metal pan type acoustical materials is Gridtone with a metallic facing of aluminum or steel and a mineral fiber pad bonded to the back. All of the new materials are incombustible, attractive and effective in use. **Armstrong Cork Co., Lancaster, Pa.**

For more details circle #554 on mailing card

Low Cost Copyflex for Black-on-White Copying

Sharp, positive prints are made in seconds at very low cost on the new Copyflex Model 42 diazotype reproduction machine. Costing approximately the same as a standard office typewriter, the new machine copies blue prints and white prints, handling tracings up to 42 inches wide and any length. The developer is odor-



less, has no noxious fumes and is available in a fast, convenient spray applicator, ready for immediate use. **Charles Bruning Co., Inc., Mt. Prospect, Ill.**

For more details circle #555 on mailing card

Fire Alarm Systems Now Made by Cincinnati Time

Cincinnati Time Recorder Company announces its entry into the fire alarm field with three compact new systems for schools, colleges and other institutions. The three systems include a master code, closed circuit, supervised type; a non-code, closed circuit, supervised type; and a non-code, open circuit, non-supervised system. The systems can be operated by individual break-glass fire alarm stations of hammerless design and two types of thermostats. As many as 20 stations may be wired on one circuit, and station and system may be tested by use of a key. **Cincinnati Time Recorder Co., Systems Div., 1733 Central Ave., Cincinnati 14, Ohio.**

For more details circle #556 on mailing card

Folding Utility Truck Has Washable Cargo Bag

A washable canvas bag which hangs inside the frame by six brass grommets, fits into the new folding utility truck introduced by White. The lightweight unit is easily rolled in use, and the white 10-

ounce duck bag can be closed by a drawstring for removal from the frame if desired. It has a capacity of five bushels of



waste. The truck folds to a compact four inches for storage. **White Mop Wringer Co., Fultonville, N.Y.**

For more details circle #557 on mailing card

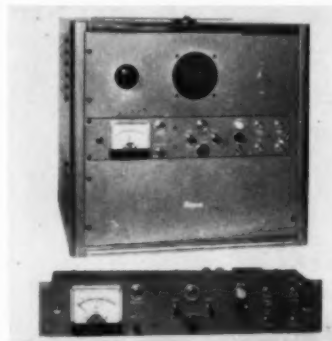
Booster Water Heater for Door-Type Dishwashers

Thorough sanitation and faster drying of dishes in door-type dishwashers is facilitated with the new Chromalox Electric Booster Water Heaters which raise the rinse water temperature from 140 to 180 degrees F. The heater is designed to meet the National Sanitation Foundation's standard and is only 9 1/4 inches in diameter and 28 inches high. It may be mounted vertically or horizontally on the floor, wall or ceiling. Heaters are available to match any work load up to 60 racks of dishes per hour. **The Edwin L. Wiegand Co., 7500 Thomas Blvd., Pittsburgh 8, Pa.**

For more details circle #558 on mailing card

Vandal Alarm System Provides Complete Surveillance

A complete, centralized sound surveillance system designed to detect and warn of the presence of intruders in closed buildings, without warning to them, is available in the Bogen Model MCR Vandal Alarm System. Whenever the noise level in a building exceeds the normal quiet level, an audible signal is sounded in a central office or police station, and a visual signal



indicates the building involved. Personnel at the central station can then listen to all sounds from that building and take the necessary action. The system has a built-in circuit which ensures its constant operation. **Bogen-Presto, P.O. Box 500, Paramus, N.J.**

For more details circle #559 on mailing card

Junior 120 Deionizer Has Removable Resin Bags

Up to 120 gallons of deionized water per hour is manufactured in the compact



new Junior 120 deionizer. Service is simplified since the removable bags of mixed ion exchange resin are lifted out when exhausted and exchanged for factory regenerated refills. The stainless steel deionizer hooks into the water supply line to furnish demineralized water under line pressure, sufficient for areas where a large deionizer is not required. Elgin Softener Corp., Elgin, Ill.

For more details circle #560 on mailing card

Spray Bottle and Measure Control for Glide Concentrated Cleaner

The non-inflammable concentrated cleaner, Glide, is now offered in Uni-Squirt dispensers. These plastic spot cleaning bottles and sprayers facilitate the use of the cleaner which removes grease, grime and soils of any kind without acid or abrasive action. It does not mar painted, aluminum or other finishes, and can be used on all kinds of flooring, walls and equipment in institutions for all maintenance cleaning. East Coast Soap Corp., 59 Coffey St., Brooklyn 31, N.Y.

For more details circle #561 on mailing card

Portable Projector Stand Is Serviceable, Versatile Unit

The new Model 41 Smith portable projector stand is ruggedly constructed of all steel for maximum stability and serviceability. It is a versatile stand for movie and slide projectors, offered at an economical price. Three-inch casters with special brake controls make the stand readily mobile. It



is 41 inches high for convenience and projection effectiveness, with a safety rail on three sides of the top platform and a non-skid shockproof rubber mat. The tapering design gives maximum stability and the two storage shelves give space for all needed equipment. Smith System Mfg. Co., 212 Ontario St., S.E., Minneapolis 14, Minn.

For more details circle #562 on mailing card

(Continued on page 78)



For safer floors with lasting beauty...

Use a slip-retardant wax containing LUDOX®

(Du Pont's anti-slip ingredient)

You benefit two ways with floor wax containing "Ludox". First, there's the skid resistance "Ludox" adds. Tiny, transparent spheres of "Ludox" exert a snubbing action with every footstep... give sure-footed traction. Second, you get the lasting beauty only a fine wax can give your floors... and it's easy to keep floors beautiful, because scratches and scuffs can be buffed out, without rewaxing.

Floor waxes containing "Ludox", Du Pont's anti-slip ingredient, give your floors the appearance you want, plus added safety underfoot.

Mail coupon below for more information, and a list of suppliers of quality floor waxes containing "Ludox". E. I. du Pont de Nemours & Co. (Inc.), Industrial and Biochemicals Dept., Room N-2543, Wilmington 98, Delaware.

MAIL THIS COUPON TODAY

E. I. du Pont de Nemours & Co. (Inc.)
Industrial and Biochemicals Dept.,
Room N-2543CU, Wilmington 98, Delaware

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... THROUGH CHEMISTRY





The Insured TUITION PAYMENT PLAN

This is the prepayment plan that brings the parent low-cost life and disability insurance protection, plus a monthly budget provision that extends to the final month of his educational expenses four or more years hence. Used today in many of the best-known colleges and preparatory schools, it has proven most valuable to administrative officers by providing them with a dignified, parent-approved method which:

- 1 alerts parents to their financial obligation when the student is accepted for admission;
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Individualized descriptive literature for mailing to the parents of incoming students is furnished for each preparatory school, college or university.

WRITE TODAY FOR DETAILS

We should like to know more about the Insured Tuition Payment Plan as it would apply to the students at:

Name of School or College _____

Address _____
Please contact: _____

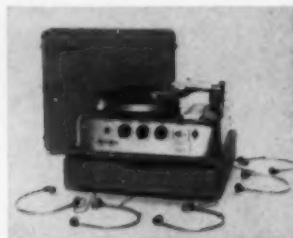
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Title _____

INSURED TUITION PAYMENT PLAN

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**Audio Center Phonograph
for Foreign Language Instruction**
The Audio Center Model 12MH8 Phonograph is a new type phonograph de-



signed for teaching foreign languages. It can be used at all grade levels, from the elementary school to the college language laboratory. It is a complete transcription playing phonograph for group listening with a built-in compartment housing eight sets of Califone high fidelity headphones, each with separate volume control. Features include a four-speed turntable, Califone exclusive pushbutton pickup arm, dual needle plug-in ceramic cartridge, straight AC amplifier, bass and treble control, high frequency cycles and a microphone input permitting the student to hear himself speak as well as to listen to recordings. **Califone Corp., 1041 N. Sycamore Ave., Hollywood 38, Calif.**

For more details circle #563 on mailing card

Solar Energy Kit for Experimental Use

A Solar Energy Kit for experimental use is being made available to school and college laboratories at cost. History of solar energy conversion, details of solar converter construction, physical properties and performance specifications are included in the kit for demonstrating the direct conversion of light into electricity, through silicon junction solar energy converters. **Hoffman Electronics Corp., Dept. K, 3761 S. Hill St., Los Angeles 7, Calif.**

For more details circle #564 on mailing card

Closed-Circuit TV Has Electronic Compensator



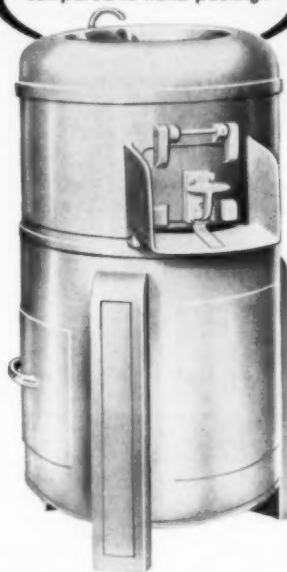
An entirely electronic light compensator, without moving parts, instantly and automatically adjusts to compensate for light changes in the new line of closed-circuit television systems recently introduced. Remote viewing of action otherwise inaccessible or hazardous is provided with the system which consists of new and improved vidicon camera, monitor and control unit. **Industrial Products Div., International Tel. & Tel. Corp., 15191 Bledsoe St., San Fernando, Calif.**

For more details circle #565 on mailing card



BLAKESLEE NO-GEAR PEELERS

Save 20 percent
compared to hand peeling!



• The combination of abrasive peeling disc and abrasive chamber lining peels vegetables faster with less waste! Only the thin outer skin is removed which saves both time and money. Available in three models with 20, 30, or 50 pounds per minute capacities to meet your particular requirements. **BLAKESLEE** belt-driven peelers have no gears to wear out or replace, assure quiet, trouble-free operation. Discharge door can be ordered for any one of four positions for easy access to peel trap. High legs may be specified (no extra cost) for discharge into higher-than-standard sinks. Drawer-type peel trap is easy to clean, prevents clogged drains! Let your **BLAKESLEE** dealer give you the complete savings story on **BLAKESLEE** No-Gear Peelers, Mixers and Dishwashers.

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Flexibility and Low Cost Featured In "Planorama" Furniture

The "Planorama" all-plastic bedroom furniture group introduced by Baumritter



is comprised of 22 units for extreme flexibility in room arrangement. Easy maintenance with damage-free tops, fronts and sides made of wood grain Melamine, chemically treated pulls which resist tarnishing and pitting, contemporary design and durable craftsmanship are featured in the line which is also low in initial cost. Standard finish is a medium Tawny Walnut with matching or contrasting beige top, but finishes for special orders are available. Baumritter Corp., 171 Madison Ave., New York 16.

For more details circle #566 on mailing card

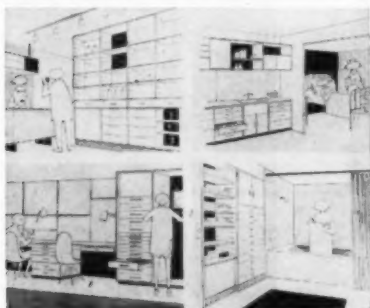
Bactericidal Detergent for Cold Glass Washing

Iodet is the name given to a new bactericidal detergent for cold glass washing. It gives a quick, sure washing action on glasses and eating utensils, with rinse run-off and potent germ killing effect without the need for heat. Iodet is non-toxic and non-allergenic, is instantly soluble in water and as low in foam. DuBois Co., Inc., 1120 W. Front St., Cincinnati 3, Ohio.

For more details circle #567 on mailing card

Stratapanel Storage System Is Flexible and Strong

Versatility and flexibility are features of the Stratapanel Storage System. Drawers and shelves may be rapidly interchanged and heights between shelves may be altered quickly for maximum utilization of



space. The system can be used in store rooms, laboratories, dormitories and other areas.

High-impact styrene forms the parts of the system, facilitating cleaning and eliminating peeling, scratching, and other problems. The components vary in number and type and have exceptional strength, durability and dimensional stability. Molded Structures Div., Robert A. Schless & Co., Inc., Elizabethtown, N.Y.

For more details circle #568 on mailing card

(Continued on page 80)



Rooms are bright and cheerful. This photo taken with normal daylight through windows. Tectum ceilings have high light reflectivity.

Architect: Frank J. Dickerson • Associate: Harold R. Fredrick • General Contractor: Seltzer & Young, Inc. • Tectum Erector: Building Specialties Company

New Cluster Plan School Has Many Design Advantages But Costs Were

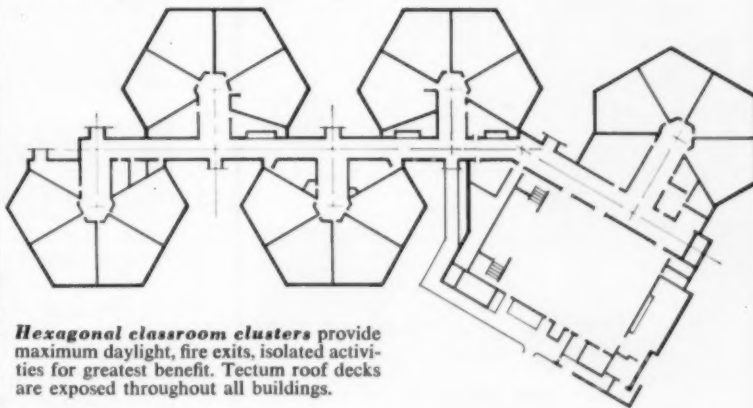
10% below allowable State costs

This is the new Rocky Grove Elementary School, Rocky Grove, Pennsylvania. While the design is packed with functional advantages, costs were held below average.

For example, each hexagonal cluster contains four classrooms. Each classroom has two window walls for maximum daylight. No student is more than fifty feet from a fire exit at any time. Each unit studies, plays, moves about for class changes or rest periods, simultaneously; confusion is isolated from other areas.

Another recommendation for open construction: Tectum roof decks are exposed in all classroom areas and corridors throughout the school. Tectum gives insulating and acoustical benefits in a single material; a simplified roof system at lower cost.

Tectum Corporation, Newark, Ohio. Plants in Newark and Arkadelphia, Arkansas. Regional offices in Atlanta, Philadelphia, Columbus, Chicago, Dallas, Beverly Hills, Seattle and Toronto, Canada.



Hexagonal classroom clusters provide maximum daylight, fire exits, isolated activities for greatest benefit. Tectum roof decks are exposed throughout all buildings.

Tectum®



Upholstered Stacking Chair Offers Strength and Comfort

Four-way leg bracing gives maximum strength to the new Howell upholstered stacking chair. When stacked, a horizontal tubular spacer with rubber bumpers rests on the frame and protects it and the upholstery. The chair has an upholstered box seat and the curved, upholstered back is enclosed between tapered tubular back



posts with legs extended to protect walls from damage. The welded tubular steel frame is available in Blactone, Pewterstone, Bronzstone and Chromsteel finishes. The Howell Co., St. Charles, Ill.

For more details circle #569 on mailing card

Laminated Wood Floors Have Cork Underlay

A cork and asphalt underlay is now used with Modernwood Cushion-Ply Laminated Block Floor Systems for maximum resiliency in gymnasium and other wood floors in schools. The Cushion-Ply laminated block flooring is made from

high quality Carya Hicoria veneers, cross laminated and bonded with waterproof glue. Each block has a one-piece face and is tongued and grooved for strength, resiliency and attractive finished appearance. The Modernwood Co., Clinton, S.C.

For more details circle #570 on mailing card

Midgetape Recorder Is Virtually Pocket-Sized

The battery-operated Midgetape Recorder is a voice recorder which can be used any place. The conference pick-up permits its use for conferences or group meetings, it can be used for recording interviews or special discussions and for



other needs. It can also be used in a car, to save note-taking and other uses. Thomas A. Edison Industries, McGraw-Edison Co., West Orange, N.J.

For more details circle #571 on mailing card

Automatic Slide Projectors Have Micro-Mount

Four new models of completely automatic slide projectors are introduced in the Explorer Series. Each incorporates the Micro-Mount slide handling system which mechanically prevents slides from "popping" or spilling from the tray and protects them from dust. Pushbutton control moves slides forward or back as desired. The new



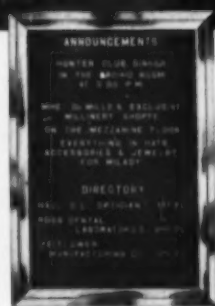
Explorer projectors have swing-down front and rear panels, illuminated "dash-board" controls at the back of the machine, and the Filmovara zoom lens which adjusts the size of the picture to the screen without moving the projector. Bell & Howell, 7100 McCormick Rd., Chicago 45.

For more details circle #572 on mailing card

Polyester Resin Finish on Glid-Tile

A smooth, tile-like finish called Glid-Tile is now available for application to materials ranging from concrete blocks, plaster and wall board to wood and metal. The poly-

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CHALK BOARDS
All sizes, in black or green, smooth Dur-O-Plate surfaces.

CHANGEABLE LETTER STYLES
for indoors or outdoors, with or without glass doors and lighting, metal or hardwood frames.

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Handsome, sturdy, highly visible and attention-compelling. DAV-SON BULLETIN BOARDS get the message across quickly and surely.

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Wall-Away Corporation
WABASH, INDIANA

ester resin finish provides a hard, durable protective coating approximately 20 times the thickness of the average two-coat film and is applied in the same manner as paint. It is a thermosetting, self-baking material that becomes extremely hard, non-porous and chemical-resistant after curing, withstanding the effects of many corrosive agents, acids, solvents, alkalies and hot water, and it can be cleaned with the strongest soaps and detergents. Glidden Co., 11001 Madison Ave., Cleveland 2, Ohio.

For more details circle #573 on mailing card

Serv-O-Lift Dish Dispenser Adjustable at Top

Dispensing level for dishes in the new Serv-O-Lift four-stack dispenser is easily



adjustable from the top. The stainless steel cup at the bottom of the dispensing tube is lifted and the disc underneath rotated, moving it up or down as desired. The disc

is made of rust inhibited steel and the entire leveling mechanism is joined into a single unit by means of a non-kinking ball. A recessed switch box on the front of the dispenser permits adjusting heat within the dispenser. Serv-O-Lift Corp., 1205 Dorchester Ave., Dorchester 25, Mass.

For more details circle #574 on mailing card

Power Hand Megaphone Broadcasts Quarter Mile



The Falcon "Chief" transistorized power megaphone broadcasts speech intelligibly over a quarter mile range. It employs a readily available battery capable of 6000 two-second messages and push-pull transistors for unusual clarity and carrying power. It is light in weight and easy to carry by the plastic sling strap with squeeze-grip for one-hand operation.

The "Chief" is constructed of red and gray plastics of high abrasion and impact resistance with all materials and finishes suitable for rough outdoor use. Falcon Alarm Co., 243 Broad St., Summit, N.J.

For more details circle #575 on mailing card

Literature and Services

• A 32-page catalog of "Steelcase Files," printed in full color, is available from Steelcase Inc., 1120 36th St., Grand Rapids, Mich. Data on file cabinets and storage cabinets of varying heights and sizes, filing helps available, and details of construction are included.

For more details circle #576 on mailing card

• A Handbook of Administrative Methods is available from Remington Rand Div., Sperry Rand Corp., 315 Fourth Ave., New York 10. Entitled "School Administration Records and Equipment," the handbook describes the many aspects of Remington Rand's ability to provide systems, machines, equipment and supplies to create, house, preserve, control, process and interpret records for the efficient functioning of a modern school.

For more details circle #577 on mailing card

• "A Chemical Approach to Controlled Wash Pressure" is discussed editorially in a 16-page booklet available from Economics Laboratory, Inc., 250 Park Ave., New York 17. It presents the results of studies of the two new commercial dishwashing compounds, Score and Event, in relation to machine wash pressure. Machine factors, chemical factors, laboratory apparatus, food soil studies, effect of rinse additives, studies of detergents present and new, effect of temperature, wash impact apparatus studies, field studies and a wash pressure survey are among the subjects covered by text and illustrations.

For more details circle #578 on mailing card

(Continued on page 82)

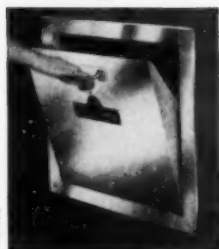
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Disposal...even a new
building is obsolete!

Centralized disposal in multi-story buildings is more than a convenience—it assures yearly savings for the life of the building. Wilkinson Chutes are designed for the centralized disposal of soiled linen, rubbish, dust, waste paper, garbage, or any other material that can be dropped without damage from an upper floor.

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in Sweet's
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This mobile ladder truck saves 50% or more labor time. Widely used for maintenance of lights; painting, washing, cleaning of windows, blinds and upper wall spaces. Model M-6, shown, is for 7' to 14' overhead work. Also available in a smaller and a larger model.

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Without obligation please send me complete information.

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Institution _____
Address _____
City _____ Zone _____ State _____

• An informative motion picture for high school and college students, as well as for P.T.A. and other adult groups, is available in "Hands We Trust," just released by the American College of Surgeons, 40 E. Erie St., Chicago 11. Portraying the successive steps in the education of a young surgeon, from his admission to medical school, through post graduate training, to final certification as a specialist and acceptance as a Fellow of the American College of Surgeons, the 30-minute film is designed to acquaint students, parents and the public with the requirements the surgeon must meet to qualify in his specialty today.

For more details circle #579 on mailing card

• Ideas for architects, business managers and other planners are presented in Catalog No. 600, a new eight-page bulletin on the "Fold-R-Way" Folding Partition available from Richards-Wilcox Mfg. Co., Aurora, Ill. Designed to help answer the problem of how to accommodate more students at the least cost, the catalog employs drawings and photographs to illustrate the points discussed.

For more details circle #580 on mailing card

• "The Tornado Method of Furnace and Boiler Cleaning" is discussed in a four-page brochure published by the Breuer Electric Mfg. Co., 5100 N. Ravenswood Ave., Chicago 40. The result of a lengthy study of boiler cleaning problems and heat transfer loss occurring in soot-covered boiler tubes, the leaflet explains how savings can be realized in fuel bills.

For more details circle #581 on mailing card

• The use of Bol-Tabs to prevent rust and other discoloration of toilet bowls during the periods of dis-use during the summer is discussed in a leaflet available from Horizon Industries, 400 Upper Midwest Bldg., Minneapolis 1, Minn.

For more details circle #582 on mailing card

• Bulletin DH-16B issued by Page Steel and Wire Div., American Chain & Cable Co., Inc., Monessen, Pa., gives factual information on Page Chain Link Fence with Aluminized Fabric. Styles, gauges, construction features and other data on the fence that combines strength with weather resistance are presented in the folder.

For more details circle #583 on mailing card

• A new 16mm sound film on Trampolining and Diving, entitled "Whatever Goes Up . . ." is available from Nissen Trampoline Co., 200 A Ave., N. W., Cedar Rapids, Iowa. The 15-minute film was produced for the firm by Universal-International for use in schools, camps and clubs.

For more details circle #584 on mailing card

• Luxtrol Automatic Light Control Systems are the subject of Bulletin L159A prepared by The Superior Electric Co., Bristol, Conn. The 28-page booklet discusses the right light for classrooms and other areas, elements to be considered in making lighting calculations, and how Luxtrol Automatic Light Control Systems make the right light possible. Charts, line drawings and photographs are used to illustrate the comprehensive data presented in the bulletin.

For more details circle #585 on mailing card

• Faucet stems fitting over 300 different types of fixtures are shown on the "Eye-Identification" chart available from Crest Mfg. Co., Inc., 4-65 Forty-Eighth Ave., Long Island City 1, N.Y. With the chart any stem can be quickly identified and replacement ordered by a code number. Stems not shown on the chart will be duplicated if sent to the company.

For more details circle #586 on mailing card

• "The New Way to Teach 5 Classes in 1 Room" is the title of a six-page folder giving full detailed information on Cramer Profession-L "Business Practice" Furniture. Issued by Cramer Posture Chair Co., Inc., 625 Adams, Kansas City, Kans., the folder is printed in color and illustrates and describes the exclusive features of the Profession-L school furniture components.

For more details circle #587 on mailing card

Suppliers' News

Royal Metal Mfg. Co., 1 Park Ave., New York 16, manufacturer of institutional furniture, announces the purchase of the Arnot Furniture Division of Aetna Steel Products Corp., manufacturing a line of modular office furniture and partitions.

Smithcraft Corporation is the new corporate name of Smithcraft Lighting, Chelsea, Mass., manufacturer of lighting equipment. The old corporate name of A. L. Smith Iron Co. is being discarded. Corporate ownership and management remain the same, according to the announcement.

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Built-in swivel lamp (Model 319) designed for Marquette University

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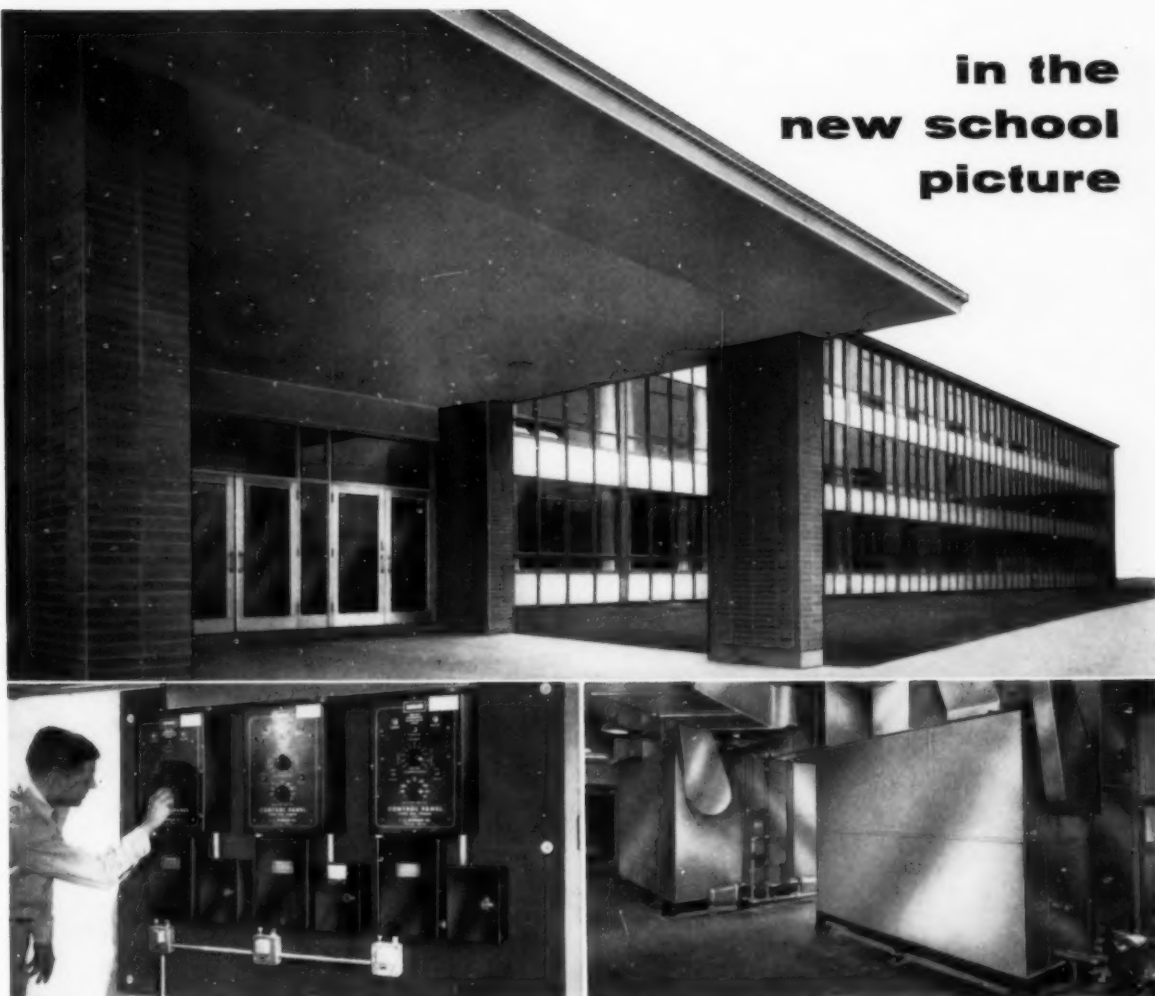
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University Microfilms,
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